

RAILWAY AGE

MARCH 26, 1949

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RAILWAY AGE

With which are incorporated the Railway Review, the Railway Gazette, and the Railway-Age Gazette. Name Registered in U. S. Patent Office.

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Exceptionally heavy traffic . . . steep grades (helpers are cut in and out of trains at 13 points within the territory) . . . sharp curves . . . heavy snows . . . slide areas . . . extreme cold . . . combine to make the 175-mile Reith, Oregon to Huntington territory of the Union Pacific one of the most tortuous stretches of single-track mountain railroad found anywhere in the country.

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With the *maximum* advantages of this modern method of train operation obtained by *concentrating control at division headquarters*, the Union Pacific was enabled to set new traffic records for this portion of the railroad and *without congestion*. Train movements were coordinated on a division-wide basis and service hours of helper locomotives were greatly increased. Most important, the need for a second main track was eliminated and it was even possible to remove several passing sidings.



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WEEK AT A GLANCE

NEWEST "ZEPHYR": The long-heralded "California Zephyr"—deluxe Chicago-San Francisco train of the Chicago, Burlington & Quincy, the Denver & Rio Grande Western and the Western Pacific—went into service last Sunday, March 20. Appropriately enough, therefore, this latest addition to America's rapidly growing list of new or newly equipped luxury trains is the subject of two feature articles and one news article in this issue. One of the feature articles, at page 74, describes the Budd-built cars which make up the new train; the other, at page 84, tells about its operating and service features. The news item describes the inaugural ceremonies for one of the six complete sets of equipment at San Francisco.

QUESTIONS OF TOP POLICY: Several major questions of industry-wide policy are facing the railroads as they re-orient themselves to conditions where the getting of business has become a more pressing problem than the handling of the business offered. Our leading editorial raises some of the most important of these questions, and suggests that a positive, affirmative program is at least part of the answer to all of them.

AND SOME OF THE ANSWERS: At least partial answers to some of the questions raised in our leading editorial were suggested by Laurence F. Whittemore, president of the New Haven, in a fighting talk to the Western Railway Club at Chicago on March 21. Mr. Whittemore's address is reported in our News pages.

"POPULAR APPEAL": The "popular appeal" of "new trains like the 'California Zephyrs'" can "help immeasurably" to keep the railroads solvent and win for them "the strong popular support of the American public," in the opinion of Edward G. Budd, Jr., president of the Budd Company. Mr. Budd's opinion to that effect was expressed in a recent speech at San Francisco, which is summarized in our News section.

ALL OVER BUT THE SHOUTING: After 11 months of negotiation, the railroads and the 16 non-operating brotherhoods have agreed to put into effect on next September 1 a five-day, 40-hr. week for non-operating workers. The history of the dispute is reviewed, and the entire settlement—which involved many points in addition to the question of working hours—is summarized, at page 86.

NICE WORK—IF YOU CAN GET IT: The prospect of drawing a whole extra day's pay for the few minutes' work involved in coupling an air hose is understandably attractive to those in a position to receive it. But it's pretty tough on the railroad that has to pay it—and it's also a striking example of the featherbedding philosophy that

has forced railroad costs, and consequently railroad rates, to ceiling or near-ceiling levels. The subject is being threshed out in Federal court, with the Pittsburgh & Lake Erie on one side and some of its trainmen on the other. The background of the case is reviewed on page 92.

AMONG THOSE PRESENT: Completing our report of the American Railway Engineering Association's Golden Anniversary meeting at Chicago last week, and of the accompanying exhibit of the National Railway Appliances Association, we present on pages 88 through 91 of this issue a series of informal pictures of some of the railroad and railroad supply men who were on hand for the festivities.

MORE MECHANIZATION: An editorial on page 73 points out that one almost certain result of adoption of the 40-hr. week for their non-operating employees will be the purchase, by the railroads, of many more machines to offset the additional cost by increased mechanization of maintenance-of-way work.

THE THREAT OF "GIVE-AWAYS": W. G. Vollmer, president of the Texas & Pacific, told the Southwest Shippers Advisory Board at Galveston, Tex., on March 18 that the future of privately-operated railroads is being threatened by the "give-away" notions so prevalent in today's political thinking. His remarks, which closely accord with our own opinions on the subject, are reproduced at some length on page 98.

"AGE OF IMPOTENCE": The idea that the Railway Labor Act could stand a thorough overhauling is not wholly new. But when that idea is vigorously expressed by a responsible industrial traffic man in an official public statement the fact is worth reporting. The man is Andrew H. Brown, of the Cleveland Chamber of Commerce; the occasion was his legislative statement to the Great Lakes Regional Advisory Board, and the report of his remarks is in our News columns this week.

MORE LIGHT ON TRUCK SUBSIDIES: Further proof that heavy, long-distance trucking is subsidized—heavily so—by automobile owners, operators of light trucks and taxpayers in general—including the railroads—is contained in an impartial report recently completed by Griffenhagen & Associates, at the behest of the Illinois Legislature, to determine the needs of that state's highway system and means of raising funds for its upkeep and improvement. The report reaches a number of interesting conclusions, summarized in an article on page 95 and in an editorial on page 73.

Off to a good start...

Climb aboard this Model 53—or any of the many Fairbanks-Morse rail cars for that matter—and start another good day! Here is transportation for inspectors, signalmen, or maintenance crew—that assures getting to and from the job with real comfort, convenience and reliability. Easy to start, easy to drive, easy to stop—and well balanced for easy removal from the rails—these are some of the reasons railroad men prefer Fairbanks-Morse Railway Equipment. Fairbanks, Morse & Co., Chicago 5, Illinois.



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SOME NECESSARY DECISIONS ON TOP-POLICY QUESTIONS

Several major questions of industry-wide policy are facing the railroads—upon which resolute answers, if attainable, would undoubtedly put the carriers on the offensive rather than the defensive. In the area of public and political opinion where most of these problems lie, positive action and aggressive confidence, of themselves, are the principal ammunition needed for successful solutions. These major questions include, among others, the following:

Are Railroads "Pricing Themselves Out of the Market"?—This question has been raised, unfortunately, in a form which has attracted sensational journalism and has aroused more emotional argument than determination to seek answers in cold-blooded facts. Some railroads with extensive statistical departments can reply to the question categorically—but usually only so far as the particular railroad itself is concerned. Seen from the standpoint of the individual railroad, one of them may give an affirmative answer and another a negative one, and both of them may be right.

To get the correct answer from the viewpoint of the welfare of the industry as a whole, do not the railroads need to assign a competent and confidential statistical bureau to the task of providing current monthly figures on "potential" and "actual" railroad tonnage of all principal commodities, by regions? This is not a job of impossible magnitude

or complexity for skilled statisticians, as some individual railroads already know from experience. The industry as a whole ought to have such information while it is still fresh and useful for diagnosis and remedial action, instead of finding out what has happened so long after the event that the data are serviceable only for purposes of an inquest.

What Is Railroad Policy on Highway Finance and Proper Charges for the Use of Highways, Waterways and Airports?—The railroads have never, we believe, expressed an opinion before committees of Congress on proposed "federal aid" highway appropriations. It is possible that they may not regard this question—insofar as it effects non-commercial or local transportation—as a proper concern of theirs. But might they not, at least, appear before highway and appropriations committees with suggestions as to safeguards for "federal aid" appropriations to minimize the injury which government "investment" in long-haul highways is doing to private investment in railroad fixed property? Specifically, should not the railroads discover and make known the effect on private financing of the railways of the provision in the federal highway act which forbids the collection of tolls on federal-aid highways?

Might it not also be well to inject the question of the maintenance of a supply of private capital to the railroads—and the public interest in securing

modern railroad service—into all hearings where appropriations for waterways and airways are being considered? If this question were persistently raised, the public would eventually come to realize that much more is involved in tax donations to government-owned transportation plant than the simple issue of a hand-out of public money; in addition, the *negative* effect of neglected development of the railroads is always included. Quite likely the railroads might not attain complete unanimity of opinion on these questions, but surely a conservative and easily explainable and defensible program for the financing of publicly-owned transport plant could be outlined which would command the support of an overwhelming majority of the railroads, and eventually of intelligent public opinion.

How Much Relaxation in Regulation Is Justified and Needed?—President L. F. Whittemore of the New Haven in a speech in Chicago this week said that “monopoly [of transportation by the railroads] having disappeared, the giant which was tied so securely” by regulation should “in the public interest be now allowed enough flexibility in regulation, pricing its products and in changing its practices to enable it to prosper in those places where its survival as the great producer of mass intercity transportation is a public necessity.”

Is it not highly desirable that the railroads should agree among themselves upon a *specific* program of changes in the Interstate Commerce Act, state regulatory legislation and taxation which they could effectively “sell” to the country—as required, not in the railroads’ selfish interest, but in the public interest in a healthy railroad industry? Would not a proposal have some chance of success which would provide that most restrictive provisions in the present regulatory law have added to them some such clause as: “This restriction to be applicable only at such times as the average price of railroad equity securities shall be 100 or more”? The effort to secure relief in this direction would be of great educational value even if the entire objective were not attained. Interest in such a program could doubtless be stimulated if the railroads would announce a specific program of improvements which they would undertake if legislative encouragement were forthcoming to justify such outlays.

What About the Depreciation Rate?—In an address abstracted in the January 22, 1949, issue of this paper, President Arthur Atkinson of the Wabash raised the question of the inadequacy of charging depreciation on railroad property at original cost instead of at the cost of replacement. Chairman Patrick McGinnis of the Norfolk Southern in a speech to the New York Railroad Club, reported briefly in the news pages of our February 26, 1949, issue, further developed this same theme. It is known that many informed people who do not

favor changing the basis of depreciation to replacement cost, nevertheless do advocate greatly increasing the percentage of original cost to be charged annually. To the objection that increased depreciation charges would involve the danger of putting the railroads “into the red” in years of light traffic, the obvious answer is made that—since railroads must depend so largely upon earnings for their supply of capital—it is desirable that earnings be applied to this purpose before taxes are deducted.

The Public Interest in Railroad Earnings, Credit and Capital Supply—A few weeks ago an organization known as “Americans for Democratic Action” suggested to the Association of American Railroads that the railroads withdraw their case for further rate increases—as a contribution to improvement in general economic conditions; because of their current “high earnings”; and because of an alleged absence of need for larger earnings to enable the industry to furnish adequate service. President Faricy of the A.A.R., of course, made a reply as suitable as possible, in view of the fact that the A.A.R. does not deal with rate matters.

Why is it, though, that the railroads should have to *defend* themselves against such an outrageous distortion of the facts? The American economy—industry and agriculture—is not in such a sorry state that it needs contributions from the railroads in order to assure its healthy survival. The shoe is, on the contrary, quite decidedly on the other foot. Farm income, while down from its peak, is still at levels of great prosperity. Railroad stocks are selling at less than one-third of the “industrials.”

Able students of economics and politics have observed of America’s industrial leadership that, all too frequently, it concedes the initiative in discussion of public questions to its critics and detractors. If there were an adequate *affirmative program* in progress to convince the American people of the public interest in a restoration of railroad earning power, pointing at the same time to the specific steps (not merely rate increases) required to that end, then probably “Americans for Democratic Action,” the Justice Department, and other antagonistic interests would be rather more reluctant than they have been to attack the railroads so frequently. Since the railroads’ problem is primarily political, they are not going to be able to avoid public controversy. In such a contest, the strategic advantage lies almost always with the offensive.

* * * *

The above list by no means exhausts the subjects upon which a greater degree of crystallization of opinion on the part of railway leaders, followed by appropriate action, would be most helpful.

Such questions cannot be evaded by ignoring them—because evasion is itself an answer, of a sort, but it is not a satisfactory or profitable answer.

PICKING THE TAXPAYER'S POCKET

A detailed study of highway costs in Illinois, recently released, reveals that large trucks in inter-city commercial service are heavily subsidized at the expense of the private motorist and the general property taxpayer. There is nothing new about the disclosure—the condition has obtained for years in practically every state in the union. Its significance lies in the fact that it comes from a private engineering firm hired by a committee of the legislature to determine how and where the money can and should be found to restore the allegedly crumbling roads of a state hitherto notoriously indulgent toward commercial trucking. Its usefulness is enhanced by the fact that the study did not set out to investigate relative subsidies enjoyed by competitive forms of transportation, as was true of most pre-war road subsidy reports. The primary purpose of the investigators was to find out who, among automotive users of roads, is getting gypped and from whom the increased “ante” for highway rehabilitation should be obtained. At no point are the railroads even mentioned.

The comprehensive, 500-page report attributes much highway damage to the pounding of the roads by heavier-type trucks and truck-trains. In addition, the investigators found that drivers of private automobiles and light trucks are paying nearly four times more in taxes per ton-mile than are the operators of these behemoths. Thus, truck operators are “deficit items” on two counts: first, they are not paying their just share of highway costs on the basis of relative use of the roads alone; and second, they are contributing nothing toward the repair of damage to road surfaces for which, the report asserts, they alone are responsible.

The authors of the document also emphasize that many Illinois trucks are exceeding maximum weights set by law—even though legal limits are *already* at a level which inflicts road damage. A special police force to crack down on violators and fines up to \$1,000 are suggested as a remedy. To eliminate the tax inequities existing between heavy and light vehicles, the report recommends adoption of the ton-mile system of taxation for the former.

The Illinois report—being the product of a wholly disinterested party and concerned only with the pressing practical problem of highway finance—offers the railroads an excellent basis for publicizing the inequities of present practices in levying charges for the commercial use of the highways. Trucking organizations are alert at all times to give wide distribution to every scrap of argument favorable to their cause—but the large quantity of available material revealing the seamy side of commercial use of the highways receives little or no circulation because no one has taken any particular interest in getting such information around. The

railroads have a large stake in more adequate public information on present inequities in highway finance and they would be doing a valuable public service if they would see to it that the substance of this Illinois report is widely circulated.

SHORTER WORK WEEK MEANS MORE MACHINES

There will be a sharp increase in the need for work equipment when the 40-hr. week becomes effective in the maintenance-of-way department. In addition to the increased labor cost per man-hour, reduction of the work week from 48 hr. to 40 hr. will have the same effect, in the absence of compensatory moves by the railroads, as would a reduction of one-sixth in the number of employees. To accomplish the same amount of work now being done it will either be necessary to hire sufficient additional workers to make up for the difference or to increase greatly the man-hour performance. In the absence of such increased man-hour output, one additional worker would be needed for each five men now employed. If additional gangs or employees are to be equipped with power machines and tools on no more generous a basis than the present force—and it is inconceivable that any basis less generous would be considered—then the roads would have to purchase, within a short time, an additional amount of equipment equal roughly to one-fifth of what they now have.

It goes without saying, however, that the 26 per cent rise agreed to in hourly wages will increase the number of situations where labor-economizing machinery can be used to advantage.

Another effect of the 40-hr. week will doubtless be a sharp increase in the earning power of individual machines. A recent study by a large railroad revealed that for every \$1,000 invested in the machines studied there was a saving of 3,560 man-hours per year. Assuming that the effect of the 40-hr. week and the pay increase of 7 cents an hour will be to increase wages 25 cents an hour, the *increased* savings per year would be nearly \$900 for each \$1,000 invested in machines—almost enough in itself to pay for their entire cost.

Manufacturers of maintenance-of-way work equipment have at times reported feeling frustrated by the relative slowness of the railroads to purchase as many of these machines as seemed to be needed. But if the roads now enter the market for as much equipment as recent events call for, the only reason for complaint by manufacturers may henceforth be their inability to make deliveries with sufficient rapidity to satisfy their customers.

The dining car. The steward's desk is in the background



SIX TRAINS FOR "CALIFORNIA ZEPHYR" SERVICE

Budd-built cars are owned by C.B. & Q., D. & R.G.W. and W.P.—Eleven cars per train provide seats for 138 coach passengers, plus 72 in Vista-Domes, and 107 in sleepers

A new daily passenger-train service each way between Chicago and San Francisco, Cal., was inaugurated on March 20 jointly by the Chicago, Burlington & Quincy, the Denver & Rio Grande Western, and the Western Pacific. The rolling stock for this service consists of 66 new cars, built by the Budd Company, Philadelphia, Pa., to be operated in six trains with identical accommodations. The number and types of cars and their ownership are shown in a table.

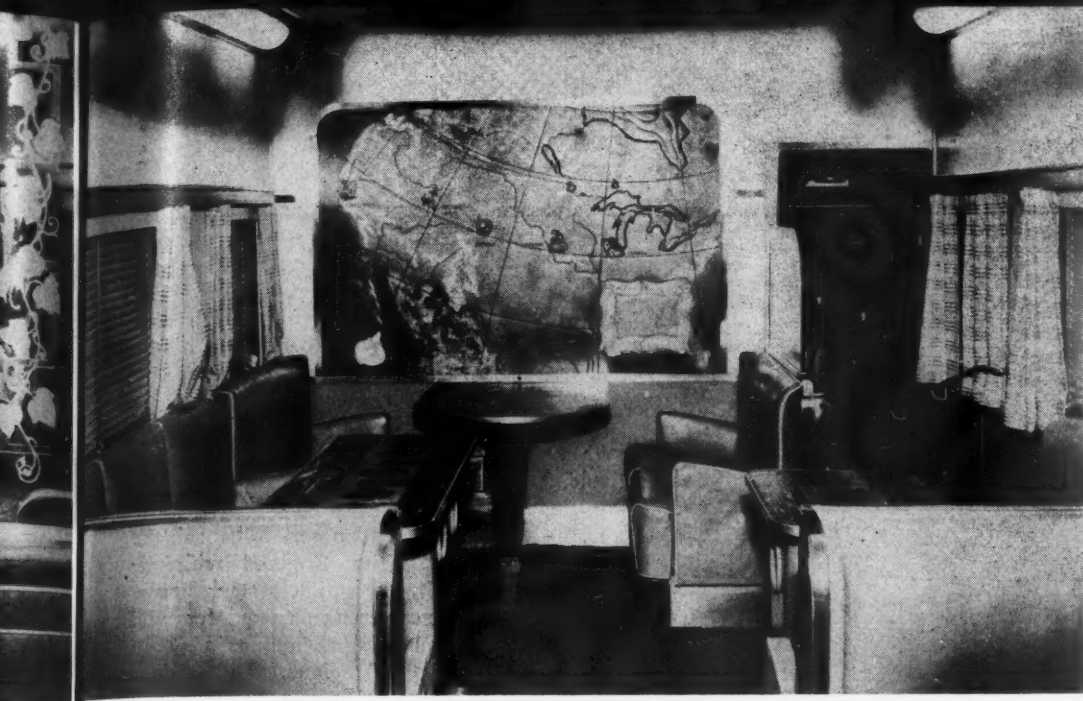
Each train consists of a baggage car, three Vista-Dome coaches, a Vista-Dome buffet-lounge car, two

six-bedroom and ten-roomette cars, a dining car, one 16-section sleeper, one six-bedroom and ten-roomette car, and a Vista-Dome lounge-observation car, with one drawing room and three bedrooms.

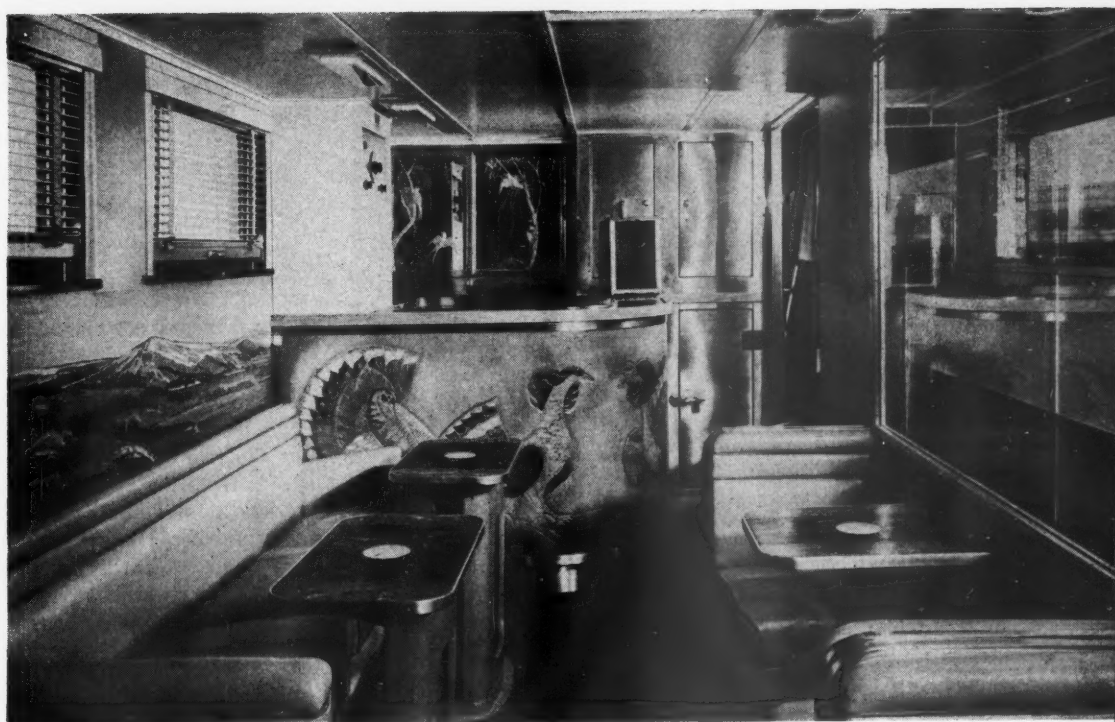
There are 138 regular coach seats and 72 dome seats in the three coaches. The 19 buffet and seven lounge seats in the buffet-lounge car are for coach passengers. Sleeping-car berth space is available for 107 passengers. The Vista-Dome observation car has seats for 12 in the buffet and 14 in the observation lounge, including the writing desk, and 24 seats in the Vista Dome. The Vista-Dome seats in the buffet-

The observation lounge

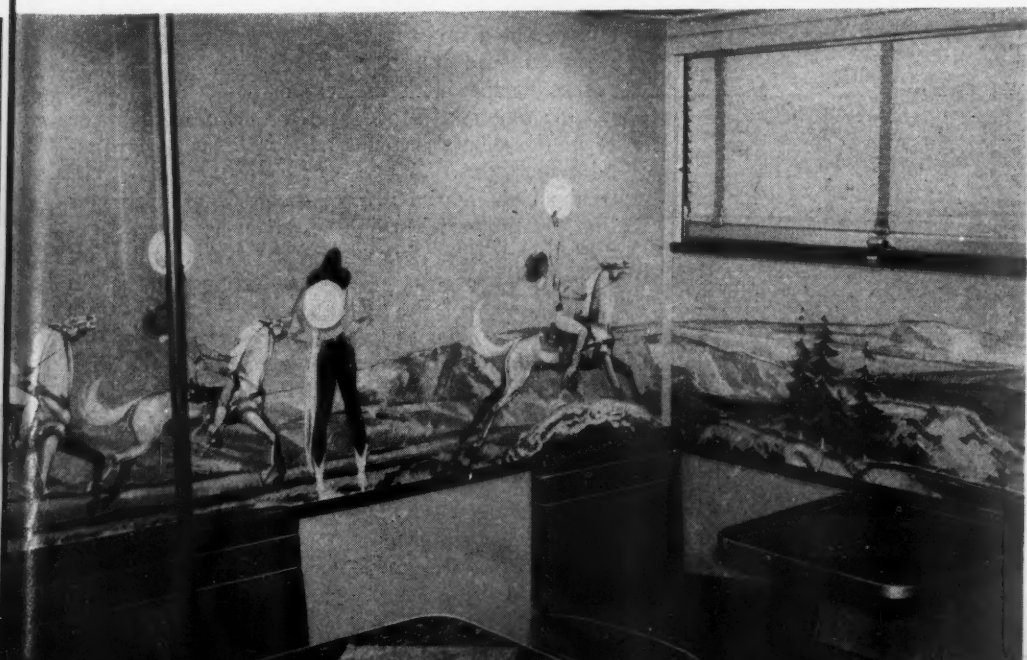




Rear end of the buffet in the Vista-Dome buffet-lounge car. The front-end walls of this room are decorated with maps of cities along the route, in carved and painted linoleum



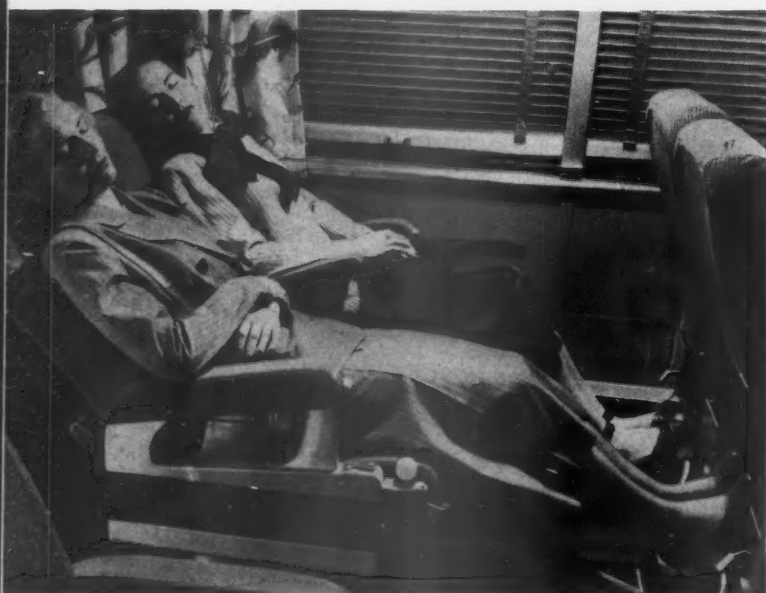
Under-dome buffet in the Vis-a-Dome room-buffet-observation car



Murals in the under-dome lounge in the buffet-lounge car

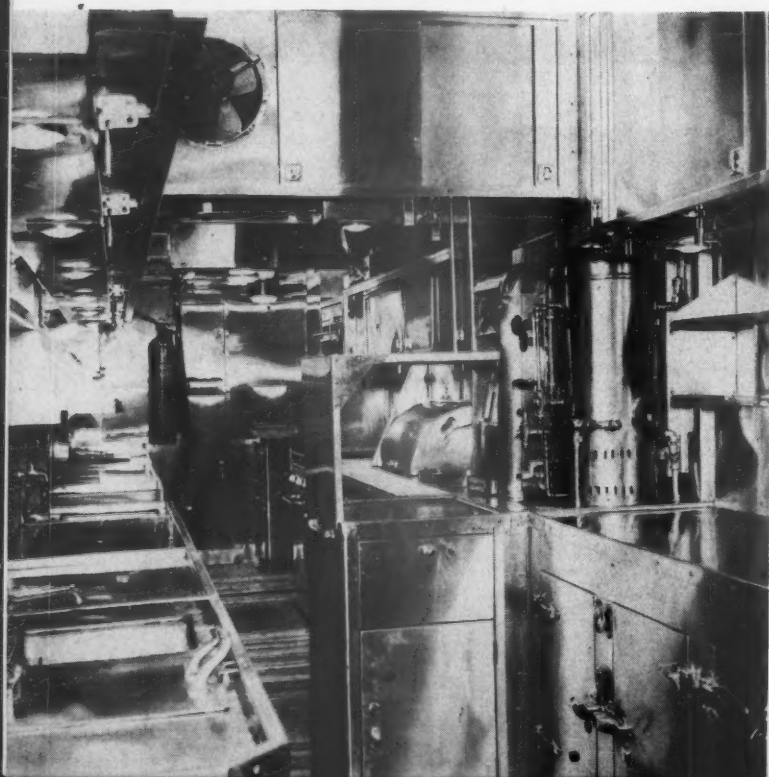


In the Vista-Dome of one of the coaches



The reclining coach seats have adjustable leg rests

Looking into the kitchen from the pantry



lounge car also are for sleeping-car passengers only.

The cars are all of Budd stainless-steel construction and are 85 ft. long, coupled, except the baggage car which is 72 ft. 8 in. coupled. The exteriors are unpainted, except for the lettering which consists of the name of the train on the middle of the letterboard, the initials of the owning road in smaller letters at each end of the letterboard, and the name of the car in the middle of the side below the windows. Each coach, sleeper and observation car has one vestibule. The buffet-lounge and dining cars are without vestibules.

Each car, including the baggage car, is named, the distinctive name in each being prefixed with the word "Silver," suggested by the stainless steel surface of the trains. The baggage cars are named for wild animals of the western plains and mountains, such as "Silver Buffalo," "Silver Antelope," and "Silver Stag." The names of the coaches are suggested by characteristic features of western life and environment: "Silver Lariat," "Silver Mustang," and "Silver Sage," are examples. The names of the buffet-lounge cars, the diners and the buffet-observation cars suggest the character of the service rendered by these cars. Three of them are "Silver Hostel," "Silver Banquet," and "Silver Penthouse." The room cars are named from characteristic features of western scenery—"Silver Butte," "Silver Pass," "Silver Surf." The open-section sleepers bear the names of western trees, such as "Silver Maple," "Silver Pine," and "Silver Palm."

The Vista-Dome Coaches

Each Vista-Dome coach has two passenger sections at the car-floor level. The forward section, as the cars normally run, seats 18 passengers, and the one at the rear, 28 passengers. The stairway to the dome leads from the 28-passenger section.

The domes on the three coaches, the buffet-lounge car and the lounge-observation car are all the same size and, in each case, seat 24 passengers.

The coach seats are fully adjustable, separately reclining for each passenger and equipped with heavily padded leg rests which can be brought into position to support the legs and feet when the occupant wishes to recline. The rest is adjustable in height and length to suit the stature of the passenger and is operated by light pressure on a knob at the edge of each seat and by a forward push with the feet. The rest is mounted on a roller so that it moves easily. When not in use, it may be folded under the seat. It makes no contact with the seat in front. A standard adjustable foot rest is provided for daytime use. The seats in the domes are not adjustable, but have adjustable foot rests.

To the right at the rear of the forward passenger section of the coaches is the under-dome passageway leading to the other end of the car. Opening off this are the women's and men's dressing rooms. In the passageway of the forward coach in each train is a swinging door dividing from the rest of the coach the section reserved for women and children only. The women's rooms in all the coaches are fitted with electric receptacles for a bottle warmer, which can be obtained from the hostess.

The second coach in each train differs from the others in using a 3½-ft. space in the vestibule end of the car as a conductor's booth. This space, which is used for luggage shelves in the other two cars, is fitted with a seat, a shelf desk and a locker. Across the aisle from the booth are the regulator and control lockers.

Vista-Dome Buffet-Lounge

The buffet-lounge car is placed immediately behind the coaches, with the buffet end forward. The buffet has seats in a variety of arrangements for 19. Opening from the under-dome passageway, immediately behind the buffet, is a small lounge with seats for seven. In this room is a bar with a large service window. Immediately beyond the bar is a buffet kitchen from which sandwiches, coffee and other beverages are served. The equipment includes a combination coffee and hot-water urn, toaster, ice-cream box, sinks, and a dish washer.

In the passageway, back of the entrance to the lounge, is a low swinging door dividing the train between coach and sleeping-car passengers. Beyond the rear of the passageway is the stairway to the dome, which is reserved for sleeping-car passengers only. The remainder of the car is given over to crew quarters. Here are berths for 15 in five sections, three tiers high, locker, toilet, shower, lavatory, and limited lounge facilities. At the rear end of the car are two bedrooms, one for the steward, with upper and lower berths, and one for the hostess, with lower berth only.

There are four sleeping cars in each train, three 10-roomette and 6-bedroom cars and one 16-section car. There are also three bedrooms and a drawing room in the lounge-observation car. Two of the room cars are placed in the train immediately in the rear of the buffet-lounge car, separated from the section car and the third room car by the diner.

At the vestibule end of each room car, in a longitudinal space of about six feet, are a toilet room and the electrical regulator and control lockers on one side and the porter's area and bedding locker across the aisle. The porter's area includes a locker, a seat, and a high folding berth which is screened from the aisle by a curtain when made up.

Adjoining the porter's area are 10 roomettes, each occupying a longitudinal space of 6 ft. 4¼ in. By reducing the width of the berth about 5 in. for a length of 18 in. from the foot, placing the toilet at the outside corner of the room and the wash basin adjoining the aisle partition, there is ample space for the occupant to stand inside the room while lowering the berth from its daytime position. A mirror on the end of the room opposite the seat contributes to a sense of spaciousness. There is a full-length mirror on the inside of the sliding aisle door and a full-length wardrobe closet at the side of the seat. There is space for luggage under the seat and in a parcel rack over the mirror.

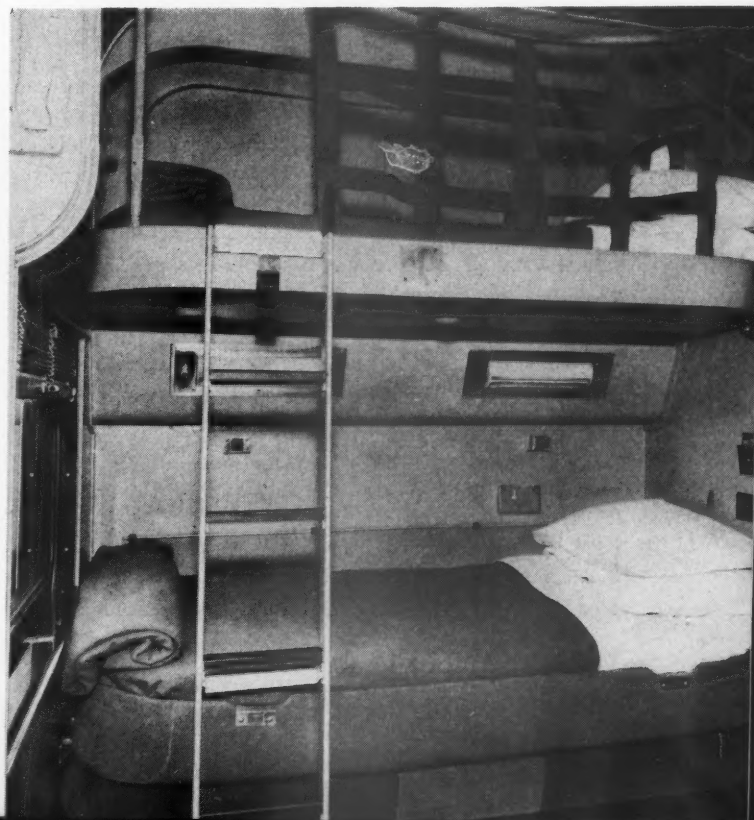
In the rear section of the car are six double bedrooms. Transverse and longitudinal rooms alternate and folding partitions permit them to be joined in pairs to form master bedrooms. In the daytime each

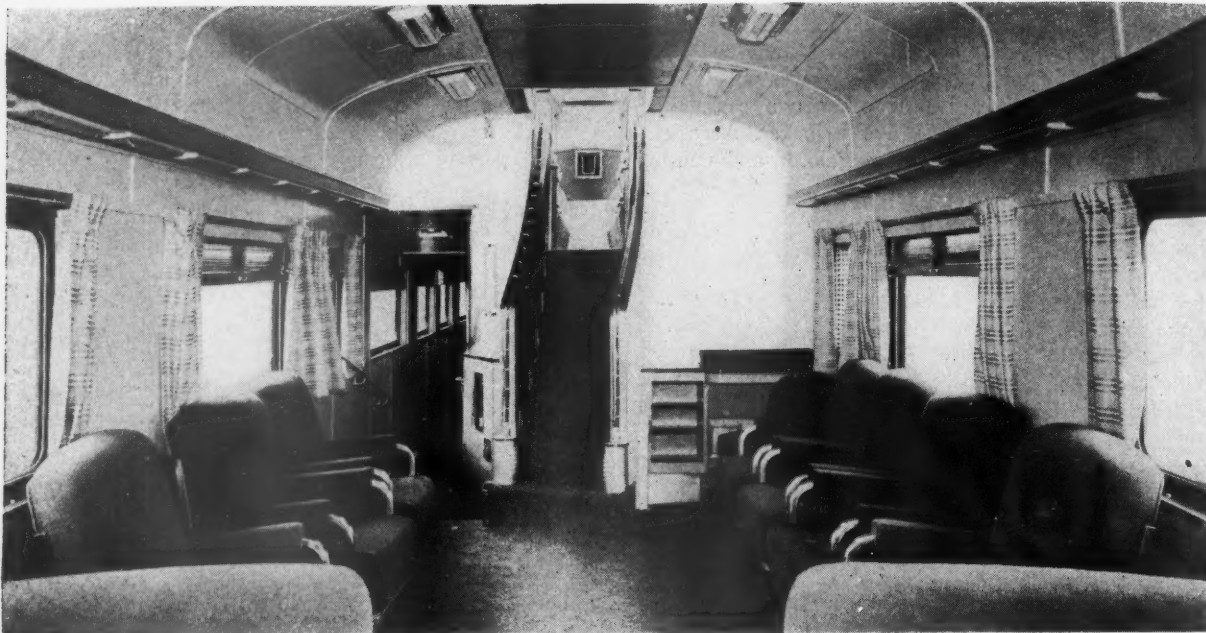
transverse room has a sofa with folding arm rests for three. The lower berth is made up by folding down the back of the sofa and the upper is hinged above the sofa. The lower in the longitudinal room operates in the same manner as the bed in a roomette. In addition to the seat of the roomette type, there is an upholstered arm chair which can be folded and stored under the lower at night. The upper, which occupies the usual position in relation to the lower at night, is stored during the day against



A "California Zephyr" roomette. The bed is reduced in width near the foot. Air-conditioning, steam-heat, light, annunciator-button, and radio controls are on the end of the wardrobe

Berths made up in a transverse bedroom





the ceiling adjoining the passageway partition. To make it up it is rolled across the ceiling on tracks which cause the leading side of the berth to drop down gradually to position as it approaches the side of the car. The front of the berth is then lowered against a counterweight spring by turning a handle which

releases it from the track. It is supported at one end on a bracket on the partition and at the other by a steel rod from the ceiling which is put in place by the porter.

Each room has an enclosed toilet in which is a Combolet (a combination wash basin and folding

PARTIAL LIST OF MATERIALS AND EQUIPMENT ON THE "CALIFORNIA ZEPHYRS"

Weldments	American Welding & Manufacturing Co., Warren, Ohio
	Youngstown Steel Car Corp., Niles, Ohio
Steel castings	Crucible Steel Casting Co., Lansdowne, Pa.
	American Steel Foundries, Chicago
	Dodge Steel Co., Philadelphia, Pa.
	Lebanon Steel Foundry, Lebanon, Pa.
Stainless-steel castings	Cooper Alloy Foundry Co., Hillside, N. J.
	Pennsylvania Electric Steel Castings Co., Hamburg, Pa.
Precision castings	Austen Laboratories, Inc., New York
	Atlantic Casting & Engineering Corp., Clifton, N. J.
Malleable iron castings	Eastern Malleable Iron Co., Naugatuck, Conn.
	Lehigh Foundries, Inc., Easton, Pa.
Truck and miscellaneous forgings	Canton Drop Forging & Manufacturing Co., Canton, Ohio
Truck frames	General Steel Castings Corp., Granite City, Ill.
Shock absorber brackets	Houdaille Hershey Corp., Houdaille Engineering Div., Buffalo, N. Y.
Wheels and axles	Bethlehem Steel Co., Bethlehem, Pa.
Wheel slide control	American Brake Shoe Co., Brake Shoe & Castings Div., New York
Couplers and yokes; center plates	National Malleable & Steel Castings Corp., Cleveland, Ohio
Bearings	Timken Roller Bearing Co., Canton, Ohio
Waughmats	Waugh Equipment Co., New York
Air brakes	Westinghouse Air Brake Co., Wilmerding, Pa.
Hand brakes	National Brake Co., New York
Locking pins	W. H. Miner, Inc., Chicago
Bushings	Continental-Diamond Fibre Co., Newark, Del.
	Ex-Cell-O Corp., Detroit, Mich.
Pull rods	Oliver Iron & Steel Corp., Pittsburgh, Pa.
Head screws	American Screw Co., Providence, R. I.
Acobyte bond	Acorn Refining Co., Cleveland, Ohio
Outer diaphragm	B. F. Goodrich Co., Akron, Ohio
Inner diaphragm; tread plates	Morton Manufacturing Co., Chicago
Grab handles	Railway Specialties Corp., Bristol, Pa.
Door operating mechanism	National Pneumatic Co., Rahway, N. J.
Ceramic tile	American-Franklin-Olean Tile Co., Lansdale, Pa.
	Mosaic Tile Co., Zanesville, Ohio
Rubber tile	Goodyear Tire & Rubber Co., Akron, Ohio
Linoleum	Armstrong Cork Co., Lancaster, Pa.
Asphalt tile	Johns-Manville, New York
Insulation	Gustin-Bacon Manufacturing Co., Kansas City, Mo.
	Johns-Manville, New York
	Union Asbestos & Rubber Co., Cicero, Ill.
Insulmat	J. W. Mortell Co., Kankakee, Ill.
Mastic ribbon	Presstite Engineering Co., St. Louis, Mo.
Phenolic	Synthane Corp., Oaks, Pa.
Aluminum extrusions	Bohn Aluminum & Brass Corp., Detroit, Mich.
Masonite	Masonite Corp., Chicago
Plymetl panels	Haskelite Manufacturing Corp., Grand Rapids, Mich.
Plywood	Daniel Buck Co., Philadelphia, Pa.
Lumber products	S. S. Keely Co., Philadelphia, Pa.
Mirrors	Nurre Companies, Bloomington, Ind.
Vinyl wall covering	Masland Duralcather Co., Philadelphia, Pa.
Sash; bag; racks; curtain-rod fixture assemblies	Adams & Westlake Co., Elkhart, Ind.
Glass	Libby-Owens-Ford Glass Co., Toledo, Ohio
	Oesterle Stained Glass Co., Philadelphia, Pa.
	Pittsburgh Plate Glass Co., Pittsburgh, Pa.
	Pressed Prism Plate Glass Co., Morgantown, W. Va.
Russialoid	Pantasote Co., New York
Venetian blinds	Ajax-Consolidated Co., Chicago

Facing page—Entrance to the Vista-Dome from the observation lounge

Right—The Vista-Dome room-buffet-observation car



toilet). All toilet rooms in the train are floored with ceramic tile and the walls covered with a plastic impervious to water. The bedroom cars are piped for later installation of shower heads in the toilet rooms. Drains in the floors are temporarily capped.

The 16-section sleeper has no room accommoda-

tions. There are men's and women's dressing rooms, at opposite ends of the car. The men's room has two toilets. The addition of a narrow partition parallel to the aisle at the edge of each permanent headboard gives a feeling of privacy to sections in these cars.

Two seating arrangements have been used on

Drape materialF. Schumacher & Co., New York
Drape rods—curtain rods...Kirsch Co., Sturgis, Mich.
UpholsteryGoodall Co., Cincinnati, Ohio
LeatherAthol Manufacturing Co., Athol, Mass.
Eagle-Ottawa Leather Co., Grand Haven, Mich.
Lackawanna Leather Co., Hackettstown, N. J.
Mechanical Leathers, Inc., Philadelphia, Pa.
Ritter Chemical Co., Amsterdam, N. Y.
Shingles Leather Co., Camden, N. J.
Leather bumpersLouis Lefkowitz & Bro., New Brunswick, N. J.
CarpetChas. Stoumen & Son, Philadelphia, Pa.
Carpet underpadRepublic Rubber Div., Lee Rubber & Tire Corp., Youngstown, Ohio
MattressesJas. Lees & Sons Co., Bridgeport, Pa.
Dunlop Tire & Rubber Co., Buffalo, N. Y.
Firestone Tire & Rubber Co., Akron, Ohio
United States Rubber Co., New York
Berth springsNo-Sag Spring Co., Detroit, Mich.
Berth laddersMoynahan Bronze Co., Detroit, Mich.
Berth curtains — drape materialJ. H. Thorp & Co., New York
Folding chairsClarin Manufacturing Co., Chicago
Seat backsCoach & Car Equipment Co., Chicago
Dining chairsGeneral Fireproofing Co., Youngstown, Ohio
Dome seats; ash receiver hinges; foot-rest assembliesS. Karpen & Bros., Chicago
Table coveringBeck & Blatchford Co., Chicago
Kitchen equipmentAngelo Colonna, Philadelphia, Pa.
Mechanical refrigeration ..Frigidaire Div., General Motors Corp., Dayton, Ohio
RadioGraybar Electric Co., New York
Grill fabric—screen cloth..Chicopee Manufacturing Co., New York
Timetable rackAngelo Colonna, Philadelphia, Pa.
Plexiglas handrailsPearson-Berlinghof, Langhorn, Pa.
HardwareGeo. B. Henne, Philadelphia, Pa.
Loeffelholz Co., Milwaukee, Wis.
LocksBest Universal Lock Co., Indianapolis, Ind.
H. S. Getty & Co., Philadelphia, Pa.
Yale & Towne Manufacturing Co., Stamford, Conn.
Air conditioningFrigidaire Div., General Motors Corp., Dayton, Ohio

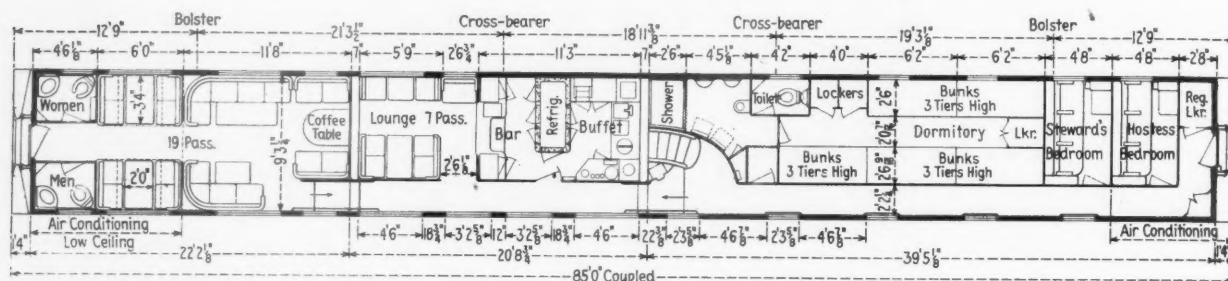
Dorex air-recovery panels..Tuco Products Corp., New York
Air grillsBarber-Colman Co., Controls & Grille Div., Rockford, Ill.
Air filtersFarr Co., Los Angeles, Calif.
Air distributorsAnemostat Corp. of America, New York
Multi-Vent Div., Pyle National Co., Chicago
Electro-Air matsAmerican Air Filter Co., Louisville, Ky.
Fans and blowersDiehl Manufacturing Co., Somerville, N. J.
Westinghouse Electric Corp., Pittsburgh, Pa.
HeatingVapor Heating Corp., Chicago
Generator beltsDayton Rubber Co., Dayton, Ohio
Generator drivesSpicer Mfg. Div., Dana Corp., Toledo, Ohio
Generators — panelsSafety Car Heating & Lighting Co., New York
WireOkonite Co., Passaic, N. J.
BatteriesElectric Storage Battery Co., Philadelphia, Pa.
Signal lightsMars Signal Light Co., Chicago
AnnunciatorsEdwards & Co., Norwalk, Conn.
Step-well operating mechanismO. M. Edwards Co., Syracuse, N. Y.
Lighting fixturesDayton Manufacturing Co., Dayton, Ohio
Luminator, Inc., Chicago
Safety Car Heating & Lighting Co., New York
Folding wash basinsAdams & Westlake Co., Elkhart, Ind.
Ozone Metal Products Co., Ozone Park, N. Y.
Walseal fittingsWalworth Co., New York
LavatoriesCrane Co., Chicago
Water softenerNational Aluminate Corp., Chicago
Combolets; HoppersDayton Manufacturing Co., Dayton, Ohio
HoppersDuner Co., Chicago
Soap and sponge holders..Hoegger, Inc., Jersey City, N. J.
Cup dispensersDixie Cup Co., Easton, Pa.
Water coolersE. A. Lundy Co., New York
Marquette Railway Supply Co., Chicago
Fire extinguishersPyrene Manufacturing Co., Newark, N. J.
Windshield wipersTuco Products Corp., New York
PaintDolphin Paint & Varnish Co., Toledo, Ohio
Pittsburgh Plate Glass Co., Pittsburgh, Pa.

the diners. One of these cars, with tables for four on each side of the aisle in the main dining section, is illustrated. These cars can be altered to provide small tables for two on one side of the aisle, thus reducing the seating capacity from 48 to 40.

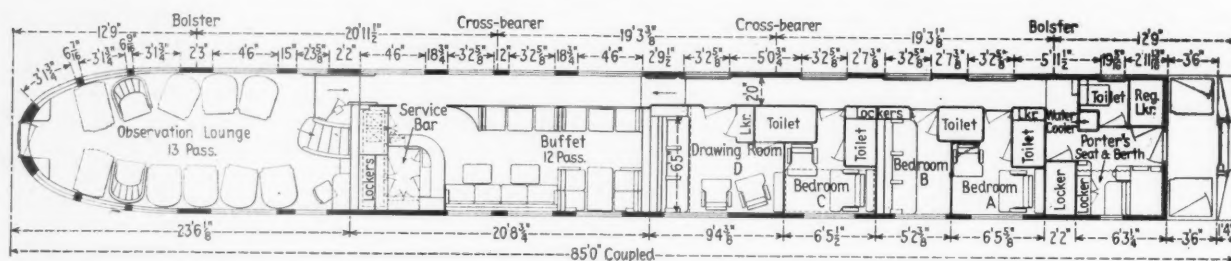
At each end of the dining room are two tables with built-in seats for four each. These are separated from the main dining room by glass panels in which

are etched a vine design. Against the kitchen partition opposite the dining-room aisle, in place of the buffet much used in the past, is a steward's station enclosed by a horseshoe counter.

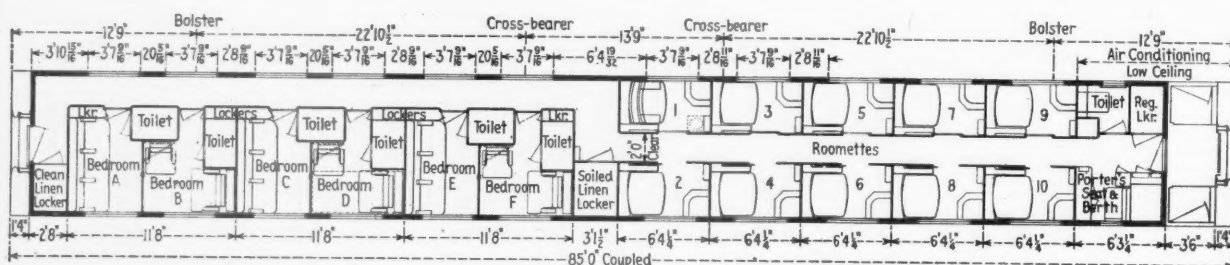
The kitchen and pantry equipment, built by Angelo Colonna, is of stainless steel. The fuel is propane gas. Some additional improvement in the kitchen temperature is effected by utilizing in the kitchen ex-



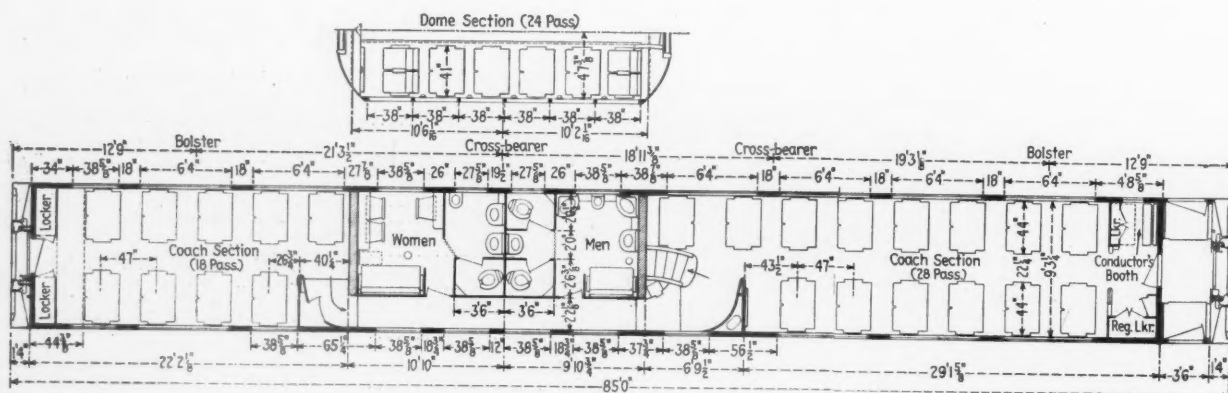
The Vista-Dome buffet-lounge car



Vista-Dome room-buffet-observation car



Six-bedroom and 10-roomette sleeping car



Vista-Dome coach

OWNERSHIP OF THE "CALIFORNIA ZEPHYR" CARS

Type of car	C.B. & Q.	D. & R.G.W.	W.P.	Total
Baggage	3	1	2	6
Vista-Dome coaches...	7	4	7	18
Vista-Dome buffet-dormitory	3	1	2	6
10 Roomette and 6 bedroom	6	5	7	18
16-section sleepers	2	2	2	6
Diners	3	1	2	6
Vista-Dome buffet-observation	3	1	2	6
Totals	27	15	24	66

cess air-conditioning capacity not needed in the dining room. Electrical facilities in the kitchen include a dish washer, a glass washer, a juicer, and two exhaust fans. The sliding door at the dining-room end of the car is operated pneumatically. The operation can be controlled also from the steward's station.

The Vista-Dome Lounge-Observation Car

The lounge-observation car provides lounging and recreation facilities for the sleeping-car passengers. In addition there are three double bedrooms and a drawing room. The cocktail lounge, seating 12, and open service bar are located under the dome. The passageway partition above the wainscot is clear glass.

Back of the cocktail lounge is the observation lounge. This has two settees facing the rear, four lounge chairs on the corridor side, and five lounge chairs, a writing desk and chair on the opposite side. The stairway to the dome is at the front of this lounge.

The three bedrooms at the forward end of this car are identical with the rooms of the same type in the room cars. Two are longitudinal and one, transverse. One pair can be thrown together. The fourth room—a drawing room—is larger than the others and accommodates three persons at night. In addition to the transverse lower and upper berths, there is a longitudinal bed which folds into the partition at the end of the room. The enclosed toilet is about one foot longer than in the other bedrooms, and there is additional clothes-locker space.

The arrangement of porter's area, lockers and toilet

at the front of this car is the same as in the all-room cars.

The baggage cars have two doors in each side, located about 16 ft. from the ends. Those at one end are double, with 9-ft. openings; those at the other end, single, with 5-ft. openings. Wet racks are provided on each side at each end of the car. Folding baggage shelves, a folding desk and a letter case are placed along one side of the car. In an alcove at one corner is a toilet, a folding wash basin, the regulator locker, and a water cooler.

Interior Decorative Treatment

Eight major color schemes are employed in these trains. There are three in the coaches and each other type of car has its own distinctive scheme. Certain elements of the decorations, however, give a sense of unity which carries throughout the train. In the coaches are figured drapes with gold background and Indian red stripes under the luggage racks which are used with all three color schemes.

Original murals of western subjects, done in oil, in the coaches and buffets, and carved and painted linoleum murals and etched glass in the dining car and the bars of the buffet-lounge and lounge observation cars also contribute to this effect.

One of the coach color combinations uses a Burgundy carpet, woodtone upholstery in the coach sections, and mahogany in the dome. These colors are combined with light Indian red on the wainscot and orchid gray on the sides and ceiling. The venetian blinds match the walls, but are relieved with Indian red tapes. Another scheme combines a green carpet and turquoise upholstery with coconut brown wainscot, coconut beige sides, and cafe au lait ceiling. The third scheme has a henna brown carpet, rust upholstery, walls of two tones of nut pine, and a light dust tone on the ceiling. Venetian blinds match the walls and have dark brown tapes.

The focal point of the dining-car decorations is the steward's desk and its back mirror. The front of the desk is a carved and painted linoleum scene, done by Pierre Bourdelle; scenes etched in the mirror glass are by the Harriton Studios. The dining-room carpet is green in a geometrical pattern. The upholstery is leather, green with yellow piping on the seats at



One of the Vista-Dome buffet-lounge cars

the ends of the room; rose on the chairs in the main section of the room. The wainscot is gray green and the sides and ceiling ecru. Drapes are bright colored figures on an ivory background.

The feature of the buffet-lounge car and the lounge-observation car is the way in which murals have been used. In the lounges of these cars, both of which are in under-dome areas, the high windows in the outside walls permit the use of these walls as well as the ends of the rooms for murals. Those in the lounges of the buffet-lounge cars are ranch motifs, done by Russell Patterson. Those in the buffet of the observation car are scenic. On the ends of the buffet in the buffet-lounge car, on either side of the car door, are large stylized maps of cities along the route of the train, carved and painted on linoleum.

The buffet, lounge, and dome of the buffet-lounge

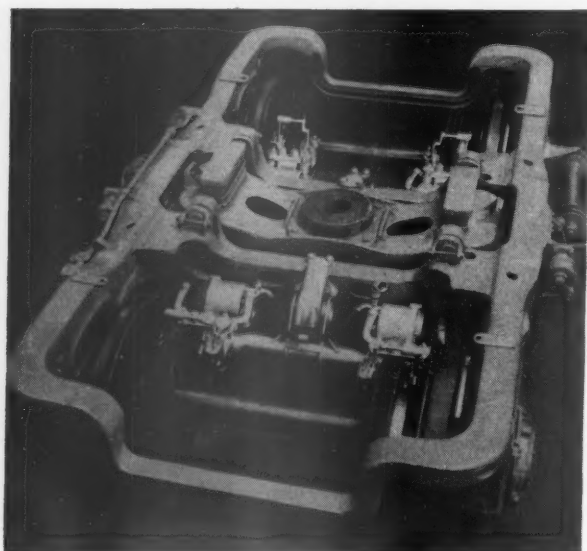
SCALE WEIGHTS OF THE "CALIFORNIA ZEPHYR" CARS, LB.

	Light weight	Ready to run	Maximum load
Baggage	103,900	120,500	167,350
Coaches	148,700	154,300	165,700
Buffet-lounge	155,620	163,520	171,620
Open-section sleeper	136,410	143,000	148,300
Diner	148,150	160,300	169,400
Bedroom-roomette	142,350	149,150	152,850
Dome-bedroom-observation ..	151,630	159,250	168,550

Note: The average weight of trucks per pair is 40,500 lb.

car are all carpeted in green in a geometrical pattern. The upholstery in the dome is green needlepoint; that in the buffet, vermillion leather with ivory piping; that in the lounge, olive green leather with deep eggshell piping. In the buffet the wainscot is gray green, the sides, cafe au lait, and the ceiling, a light gray. The drapes are white and gold.

The observation lounge room is carpeted in brownish rose, and the upholstery is divided between sand and brown. Lower walls are a rose tan and the



The trucks are equipped with Budd disk brakes

upper walls and ceiling, a delicate biege. Drapes are gold and white.

The trains are equipped with radio and public-address systems. Two two-spool wire reproducers can give twelve hours' continuous entertainment. There is also a telephone system by which members of the train crew may communicate between certain points in the train.

Communications

The Western Electric radio system consists of two sets, each having 17 pretuned crystal receivers, thus making available up to 34 broadcasting stations. This equipment is controlled from a master control panel, about 6 ft. by 18 in., adjacent to the steward's desk. The public-address system is operated here from a hand set, a push button which cuts out radio or wire-recorded programs and cuts the public address system in for announcements. There is a similar hand set in the conductor's alcove in the second coach.

In the dome coaches one selector switch determines the program for the entire car. Volume controls are separate, however, for the dome and main floor of the car. All sleeping rooms have individual loud speakers, placed in or near the ceiling for better sound distribution, and an individual five-position selector switch and volume control. The occupant may select the public address so that he may hear announcements and nothing else; he may select a wire-recorded program or either of two radio programs, or he may turn the system off entirely.

Individual radios are installed in the buffet-lounge and the lounge-observation cars. The train phone system communicates between the dining car and the buffet in the observation car.

Lighting and Air Conditioning

With the exception of the diners, all the passenger cars have 25-kw. Safety genemotors and Spicer drives. For the dining cars the capacity is 30 kw. Except for the dining cars the Exide storage battery has a capacity of 1,294 amp. hr. In the dining cars the capacity is 2,588 amp. hr. Motor alternators of 2-kw. capacity convert 32-volt d.c. power to 110-volt a.c. power. Cars with heavy a.c. electric loads are equipped with two motor alternators which operate on split loads so that one of them is off at night when the load is light. They supply power for fluorescent lighting, razor outlets, vacuum-cleaner outlets, electrostatic air filters, radios and the public-address system. Direct-current power is used for air conditioning, incandescent lighting and for the water coolers.

Fluorescent lighting is installed in all passenger space in these trains, except for the reading lights under the luggage racks in the coaches and a reading light in each roomette, which are incandescent. Incandescent lamps light the toilets, vestibules, passageways, kitchen, crew quarters and porters' areas. The reading lamps under the luggage racks—one for each seat—are individually controlled.

Each ceiling unit in the coaches has a cylindrical magnifying lens formed in the bottom to control the light to the aisle only. This design produces a low level of soft light in the seat area without glare.

As one goes up the stairs to the dome for night observation, lighting gradually changes from a high level to an extremely low level, so that the reflections on the glass dome do not restrict the passengers' ability to see out. Two small lights are concealed on the sides of the stairway on each tread. Smaller units of a similar design illuminate the leading edge of the elevated platform on which the seats are located.

A continuous row of lensed glassware, built into the ceiling on each side of the air duct, makes the Vista Dome an outstanding feature of this car when the train is in a terminal.

Dining and Buffet-Lounge Cars

In the main section of the dining car a continuous row of Luminator lensed glassware is mounted in the coves at the sides of the ceiling. This gives a high level of soft, glareless light for dining, and cheerful ceiling illumination from the enameled panel just above the clear lenses.

In the foyer a ceiling light is arranged to accent the semicircular steward's desk.

In the buffet section of the buffet-lounge car a continuous row of Luminator lensed glassware is used, similar to those in the main dining room. With this arrangement the passengers have a high level of illumination for reading and the unit across the car is completely free from glare. In the double-seat sections at the end of the car a small cornice light has been used transversely over the seats so as to direct the light over the passengers' shoulders. In the lounge individual fluorescent ceiling units are located over the tables and seats.

In the transverse bedroom are two sofa lights as well as the overhead ceiling units. At night the sofa light nearest the head of the bed serves as a night reading unit. The upper berth has a lensed reading light located just back of the passenger's head.

In the longitudinal bedroom the general illumination comes from a large unit located in the ceiling. There is additional illumination from fluorescent berth lights in the pier panels on each side of the window. The one at the head of the bed also serves as a night reading light. In the upper berth the reading light is parallel to the berth and has its light directed forward so as to cover the reading material.

In the roomettes two fluorescent tubes are placed one on each side of the mirror, with the lensed glassware controlling the light so it does not disturb the passenger while using the mirror, or while sitting beside it. The main light source is in the ceiling over the reading area. An incandescent berth light at the side can be used either in the daytime or at night.

In the open-section sleeper individual fluorescent ceiling units are located opposite each section. This unit has large prisms pressed into the side walls of the controlled lens to give additional illumination to the ceiling. The down lighting floods the car from side to side, with ample illumination for reading or relaxing. There are incandescent lights for the upper and lower berths.

In the observation-lounge the lighting is from a continuous row of lensed glassware in the soffit over the top of the windows, directing the light to the reading area. The ceiling is illuminated by lights over the seats.

The buffet ceiling units are arranged to illuminate the various types of seating arrangements properly.

A Mars oscillating light is mounted on the rear of the observation car in a housing built into the end of the car roof and a Neon sign on the rear door displays the words "California Zephyr" and a picture of the Golden Gate bridge.

The capacity of the Frigidaire electro-mechanical air-conditioning equipment is 10 tons on all passenger-carrying cars, with the exception of the four sleeping cars which have a capacity of 7 tons. On dome cars there are two evaporator units, one of six tons' capacity to cool the two main passenger sections and one of four tons' capacity for the dome and under-dome area. In the dining car about six tons is required to take care of the dining room; the equivalent of the remaining four tons is applied in the kitchen to effect some reduction in kitchen temperature. Electrostatic filters and Dorex purifiers are a part of the air-circulating system. Cool air is admitted to the passenger space through Multi-Vent ceiling panels.

Frigidaire electro-mechanical refrigeration is employed throughout the dining car and in the buffets of the buffet-lounge and observation cars. This includes ice-cube production.

Mechanical Equipment

The trucks on all cars in these trains have 6-in. by 11-in. axles, equipped with Timken roller bearings. They are of the General Steel Castings equalizer type and the castings are alloy steel. Coil bolster springs and Houde vertical shock absorbers are applied.

The 36-in. rolled-steel wheels are machine balanced. Rubber pads are placed under the center plates, under the equalizers over the journal boxes, and at the ends of the bolsters.

The trucks have Budd disk brakes. The air brakes are Westinghouse HSC type with the American Brake Shoe anti-wheel-slide device. A lever type hand brake operates through the disk brake on one pair of wheels only.

The cars are heated by the Vapor Zone Control system, and Vapor water heaters with Westinghouse water-raising system serve the lavatories. National Aluminate water softeners are installed on all cars, except for the drinking water. The Lundy circulating water-cooling system serves all bedrooms. Each car has 500 gal. of underbody water-tank capacity. The diners have an additional 100 gal. capacity in the kitchen which is connected to the water heater.

All brakes, steam and water pipes on the car bodies are copper tubing with Walseal fittings. The brake piping on the trucks is extra heavy wrought iron. The propane piping on the dining cars is brass with threaded fittings.

The couplers are National tight lock and the draft gears, Waughmat.

VISTA-DOMES ON NEWEST TRANSCONTINENTAL ROUTE

**Six sets of 11-car "California Zephyrs" cross
Rockies and Sierras in daylight on 2,532-mi. run**

On March 20 there went into revenue service between Chicago and San Francisco the first transcontinental train with Vista-Dome cars—the new "California Zephyr," owned and operated jointly by the Chicago, Burlington & Quincy, the Denver & Rio Grande Western and the Western Pacific. The six sets of equipment necessary to protect the service comprise a total of 67 lightweight stainless steel cars built by the Budd Company. One unit is the daily New York-San Francisco through car, which operates east of Chicago on alternate days via the Pennsylvania and New York Central.

The "California Zephyr" makes its 2,532-mi. run (including ferry between Oakland Pier and San Francisco) in 50 hr. 30 min. eastbound and 51 hr. 20 min. westbound. The "Exposition Flyer" which it replaces was allotted 69 hr. 20 min. for the westbound run and 62 hr. 45 min. eastbound.

Beauty Spots by Day

The schedule of the "Zephyr" has been carefully timed to permit passengers to see the most spectacular portions of the scenery en route in daylight hours. In contrast, the "Flyer" in both directions traversed the W.P.'s scenic Feather River Canyon line entirely in darkness. While it passed through the Continental Divide mountain territory in daylight, the fine mountain country of Colorado west of Glenwood Springs could not be seen. In contrast, "Zephyr" pas-

sengers in both directions will see by day the whole breadth of Colorado and also the entire Feather River country all the year 'round.

Newest Transcontinental Route

Although through sleeping cars have been operated over this route for many years, it was not until 1939 that the three roads inaugurated a through Chicago-San Francisco train. Named for the San Francisco exposition of that year, it attracted immediate public favor.

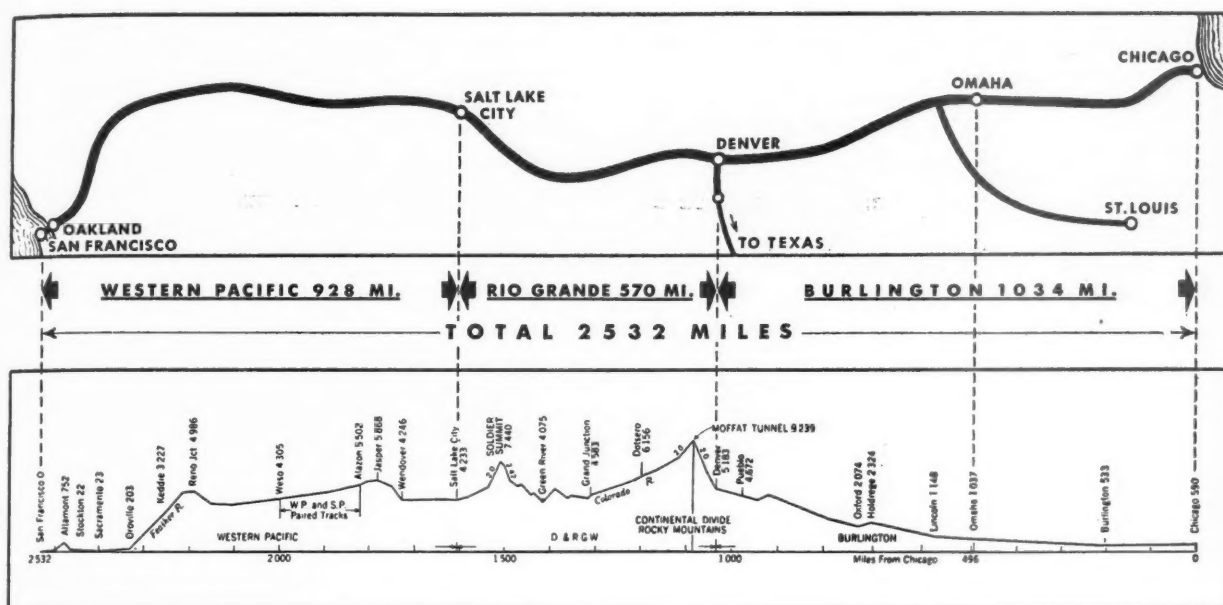
The route of the "California Zephyr" is the newest rail crossing of the Rockies and the most recent "transcontinental" line built into California. The route was not made complete until 1934 when the 38-mi. Dotsero Cut-off was opened between Orestod, Colo. (Dotsero spelled backward) and Dotsero, linking the D. & R.G.W. main line with the great Moffat Tunnel, and shortening the Colorado-mid-continent transcontinental route by 175 mi. The tunnel itself, 6.2 mi. long, is the second longest in the Amer-

SCHEDULE OF THE "CALIFORNIA ZEPHYRS"

Westbound (Read Down)	Daily Service (One day shown as example)	Eastbound (Read Up)
3:30 pm Sun.	Lv. Chicago	Ar. 1:30 pm Tues.
5:50 pm "	Lv. Galesburg	Lv. 11:02 am "
6:35 pm "	Lv. Burlington	Lv. 10:14 am "
7:48 pm "	Lv. Ottumwa	Lv. 9:00 am "
9:45 pm "	Lv. Creston	Lv. 7:07 am "
11:45 pm "	Ar. Omaha	Lv. 5:00 am "
11:55 pm "	Lv. Omaha	Ar. 4:55 am "
1:04 am Mon.	Ar. Lincoln	Lv. 3:55 am "
1:19 am "	Lv. Lincoln	Ar. 3:40 am "
2:52 am "	Lv. Hastings	Lv. 2:05 am "
4:49 am CT Mon.	Ar. McCook	Lv. 12:10 am CT Tues.
3:55 am MT "	Lv. McCook	Ar. 11:05 pm MT Mon.
8:20 am Mon.	Ar. Denver	Lv. 7:15 pm Mon.
8:40 am "	Lv. Denver	Ar. 7:00 pm "
(Moffat Tunnel and Colorado Rockies)		
1:53 pm Mon.	Lv. Glenwood	Lv. 1:35 pm "
3:47 pm "	Lv. Grand Junction	Lv. 11:53 am Mon.
10:05 pm MT Mon.	Ar. Salt Lake City	Lv. 5:40 am MT Mon.
10:25 pm MT "	Lv. Salt Lake City	Ar. 5:20 am MT "
7:42 am PT Tues.	Lv. Portola	Lv. 5:30 pm PT Sun.
(Feather River Canyon)		
11:02 am Tues.	Ar. Oroville	Lv. 2:14 pm Sun.
12:28 pm "	Ar. Sacramento	Lv. 12:50 pm "
1:34 pm "	Ar. Stockton	Lv. 11:53 am "
4:00 pm "	Ar. Oakland 3rd & Wash.	Lv. 9:44 am "
4:15 pm "	Ar. Oakland Pier	Lv. 9:30 am "
4:30 pm "	Lv. Oakland Pier	Ar. 9:20 am "
4:50 pm "	Ar. San Francisco	Lv. 9:00 am Sun.



The 120-mi. Feather River Canyon is traversed by daylight



Route of the "California Zephyr"

icas and ninth longest railroad tunnel in the world. Running 4,021 ft. below the 13,260-ft. summit of James Peak, it was completed in 1928.

The Western Pacific is the youngest of the transcontinentals. It was completed in 1909 and transcontinental service commenced the following year. Its builders had the advantage of modern engineering techniques and were able to meet the challenge that no grade should exceed one per cent. From their "grandstand seat" in the Vista-Domes "Zephyr" passengers can observe the scenic wonders of their curving route through the canyon of the Feather river, where, for 120 mi., the builders held the grade to one per cent, despite a change in elevation of more than 4,600 ft.

In its run between Chicago and San Francisco, the "Zephyr" passes over 1,034 mi. of the Burlington, 570 mi. of the Rio Grande and 928 mi. of the W. P., as shown on the map. This route was built up for fast passenger and freight service by very extensive improvements to fixed properties during the war years and period immediately preceding — especially in the Colorado and California mountain territories. Indicative of this development is the fact that the entire mileage of the "Zephyr" on the Burlington is either double-tracked or equipped with centralized traffic control; at least 455 mi., or 79 per cent, of the miles of route on the D. & R. G. W. are equipped with C.T.C.; while another 75 mi. are double-track; and 250 mi. of C.T.C.-equipped route on the W.P. is due for expansion to a total of about 366 mi. Another 182 mi. of the route in Nevada is paired track.

Four high points of elevation are crossed, as indicated on the profile herewith. The route traverses the Continental Divide through the Moffat Tunnel at an elevation of 9,239 ft. above sea level; Soldier Summit in Utah is surmounted at 7,440 ft.; Jasper in Nevada at 5,868 ft. and Beckworth Pass in Cali-

fornia at 4,986 ft. The latter is the lowest railroad crossing of the Sierra range.

The "Zephyr" normally is handled by Diesel-electric locomotives all the way. Power assigned to the train on the C.B. & Q. between Chicago and Denver will consist of three Electro-Motive 4,500-hp., three-unit locomotives. On the D. & R. G. W. between Denver and Salt Lake City the run will be handled normally with two Alco 6,000-hp., three-unit Diesels. Over the W.P. between Salt Lake City and Oakland Pier, motive power will be 4,500-hp., three-unit E.-M. locomotives. The "Zephyr" provides coach and Pullman service, with no extra fare. All accommodations are reserved in advance.

To supplement the services of Pullman conductor and porters, dining car stewards and waiters and operating train crews, the railroads have trained ten young women to serve as hostesses on the six sets of equipment. Known as "Zephyrettes," they will devote special attention to women, children and aged people traveling alone. The train also provides valet service.

The "California Zephyr" has been launched with an intensive program of publicity. Each of the three roads and the Budd Company have placed large colorful advertisements describing the new train in periodicals of national circulation. The way to popularity has been prepared by large-scale newspaper displays scheduled well before March 20. The W.P. exhibited three sets of equipment at numerous points along its line starting March 12, with special showings for employees and other groups. In addition to public exhibition of the new equipment at Chicago and other points, the Burlington operated six "preview excursions" of the train at intervals of two hours from Chicago to Aurora and return, with a round-trip fare of one dollar (children 50 cents) for the 76-mi. journey.

ACCORD REACHED IN NON-OPERATING EMPLOYEES' DISPUTE

Million railroad men win 40-hr. week with 48-hr. pay, plus seven-cent hourly wage increase—Cost to carriers set at \$640,000,000 annually

Members of the Carriers' Conference Committee and the Employees' National Conference Committee concluded negotiations in the non-operating employees' 11-months-old wage-and-hour dispute late on Saturday, March 19. The first signature—that of Carrier Chairman H. A. Enochs—went on the final agreement at 5:25 a.m. on Sunday, March 20.

Consummation of the agreement ends national handling of the case and leaves to the individual carriers the weighty task of revising working rules to meet its provisions. The agreement provides a compromise settlement to demands first presented last April by the "16 cooperating railway labor organizations"—representing nearly a million employees—for 48 hours' pay for a 40-hr. week; overtime pay for Saturday, Sundays and holidays, and a general wage increase of 25 cents an hour. The terms of the March 19 settlement are substantially the same as those originally proffered by a presidential emergency board on December 17, 1948, except for specific provisions for application of a 40-hr. work week and the handling of disputes arising in connection therewith.

Had the carriers met the original demands of the unions, the cost would have approximated \$1,500,000,000 annually. The agreement just signed is estimated to increase the carriers' costs by about \$340,000,000 for 1949, and \$640,000,000 thereafter, based on the November, 1948, level of employment.

The agreement provides:

- (1) An increase of seven cents an hour, retroactive to October 1, 1948;
- (2) Establishment of a 40-hr. work week, effective September 1, 1949, with 48 hr. pay therefor;
- (3) Establishment of a 205-hr. work month for dining car employees;
- (4) An increase of \$24 monthly (10 cents an hour) for yardmasters, retroactive to October 16, 1948, with no other changes in working schedules; and
- (5) A shorter work week in certain marine operations.

Increase Is "Non-Ops" "Third Round"

The last pay increase accorded non-operating employees—15½ cents an hour—was effective September 1, 1947, following an award of an arbitration board. This constituted the so-called "second-round" increase for this group—increases totaling 18½ cents hourly having been granted in 1946.

The demands of the non-operating unions giving rise to the current agreement were first served on the carriers on April 10, 1948. Carrier-union negotiations collapsed on September 17, after the unions had rejected a carrier offer of 10 cents an hour, and the organizations circulated strike ballots. The National

Mediation Board intervened at the behest of the railroads, but—on October 6—announced that its efforts were of no avail. An emergency board was created on October 18. Dr. W. M. Leiserson, George A. Cook and David L. Cole were appointed members. Hearings opened in Chicago on October 26 and—after a 30-day extension of time to hear the case—the board made its recommendations on December 17. They were not satisfactory to the unions, which declared that they fell "far short" of what they believed to be an equitable basis of settlement, but that they could "be used as a starting point" for additional negotiation. These further talks started on January 6.

On January 18 the carriers advised the brotherhoods that they were agreeable to a settlement based on the board's recommendations. But, because the unions continued to refuse to accept certain points in the board's report, the parties agreed to seek the assistance of the board's members in interpretations thereof. Despite the board members' assistance, these "follow-up" negotiations were unproductive of accord, so that, on March 8, the parties to the dispute agreed to let the board members act, in effect, as an arbitration board on the method of applying the 40-hr. week. Their ruling was made on March 13, and made possible the March 19 agreement.

Shorter Week with No Pay Loss

In recommending adoption of the 40-hr. week, in its original report of December 17, the board said that the five-day week was "firmly a part of our national industrial policy" and that "the railroads now stand out as a striking exception." Allowance for a "staggered" work week was recommended as the "least disturbing and costly to the industry." Pointing out that railroad operations must be conducted around the clock, the board said that—for pay purposes—Saturdays and Sundays should be treated as ordinary working days, and that management should be permitted "to schedule work assignments on a staggered five-day work week basis" consistent with their operational requirements.

When the work week is shortened September 1, "take home" earnings will be preserved by a simultaneous hourly wage increase of 20 per cent. Pay for 40 hours' work will then equal that previously paid for 48. The 20 per cent will be applied to the earnings of employees prior to the application of the seven-cent hourly increase. Together, the shorter week and the 7-cent increase will increase the "non-

ops' hourly earnings by about 25.9 per cent, bringing the average hourly earnings of such employees from \$1.18 (based on the first half of 1948) to approximately \$1.49.

The following stipulations govern application of the shorter week:

(1) The work week—subject to some exceptions—will consist of five days of eight hours each, with two consecutive days off in each seven; the work week may be staggered in accordance with operational requirements, but so far as practicable, the days off shall be Saturday and Sunday;

(2) On positions where the nature of the work is such that employees are needed six days each week, the rest days of employees filling such positions will be either Saturday and Sunday, or Sunday and Monday;

(3) On positions which have been filled seven days a week, any two consecutive days may be the rest days, with the presumption in favor of Saturday and Sunday;

(4) All possible regular relief assignments with five days of work and two consecutive rest days will be established to do the work necessary on rest days of assignment in six- or seven-day service or combinations thereof, or to perform relief work on certain days, and such type of other work on other days as may be assigned under individual agreements. Where no guarantee rule now exists, such relief assignments will not be required to have five days of work per week. Assignments for regular relief positions may vary as to starting time, duties and work locations, providing they coincide with those of the employees being relieved;

(5) Where the carrier requires deviation from the Monday-Friday week and employees contend that it is not necessary, the assignment shall be put into effect and the dispute processed as a claim or grievance;

(6) When an operating problem makes it impossible to schedule rest days consecutively, all possible regular relief positions shall be established [item (4) above]; the use of rest days other than Saturday or Sunday by mutual agreement will be considered, or efforts will be made to agree on granting accumulated rest time in consecutive periods longer than two days; if the foregoing fails to solve the problem, then some employees may be given non-consecutive rest days.

The agreement states that "the least desirable solution to the problem would be to work some regular employees on the sixth or seventh days at overtime rates, and thus withhold work from additional relief men." In cases of disagreement over the necessity of splitting rest days, the railroad may effect the assignments subject to the right of the employees to file a claim or grievance, the burden being on the carrier to prove (1) that its "operational-requirements would be impaired" if it did not split the rest days in question, and, (2), that the split could be avoided only by working some employees in excess of five days a week.

Sunday Overtime Eliminated

The agreement provides that extra men may be utilized under applicable practices, and that their days off need not be consecutive except where they take the assignment of regular employees. Existing provisions for punitive rates for Sunday work are eliminated by the agreement. It provides further, however, that unnecessary Sunday work not be established. Existing provisions for daily overtime are unchanged. Overtime after 40 hr. straight time in any work week will be paid for at time-and-one-half.

Service rendered by employees on assigned rest

days shall be paid for under existing "call rules." Existing guarantees will be reduced to five days a week. Rules governing travel time, deadheading, attending court, and so forth, will remain unchanged. The inauguration of the 40-hr. week will require the creation of relief positions where none now exist, and appropriate rules to govern travel time for employees on such relief positions are left to the individual carriers for formulation. Vacation and sick leave rules will be revised to reduce the requirements by one-sixth, so that there will be no loss in benefits as a result of the shorter week.

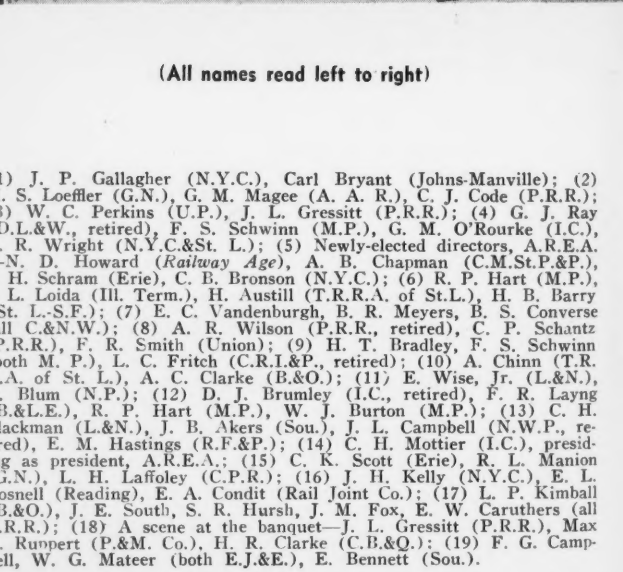
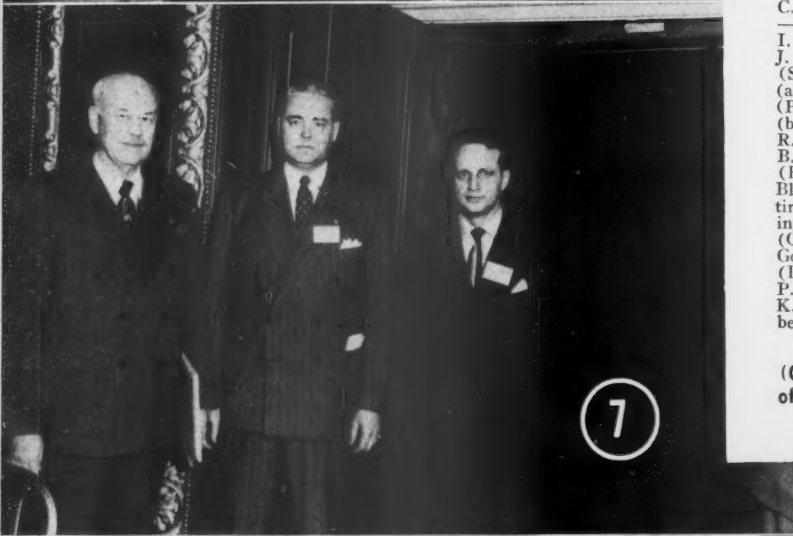
Dining Car Employees

The basic week for dining car employees is reduced from 240 hr. to 205 hr. guaranteed, and overtime at pro rata rate provided for hours worked in excess of 205 up to 240, with overtime at time and one-half after 240 hr. The basic monthly rate, exclusive of the general 7-cent increase, will be increased \$14.35, effective September 1.

The binding decision of the emergency board's members, respecting application of the 40-hr. week, established a "40-Hour Week Committee" consisting of six members of the Carriers' Conference Committees and six members of the Employees' National Conference Committee. This 12-man body will hear disputes arising out of application of the five-day week. In the event it is unable to reach a decision, a neutral referee shall be selected to act as the thirteenth member. If the majority of the committee is unable to agree upon selection of a referee, the National Mediation Board may be asked to make the appointment. The committee's decision is to be final and binding upon the parties to any dispute on which it rules.



Some 300 Chaffee, Mo., youngsters attended a recent safety program presented by the St. Louis-San Francisco, which is carrying its safety campaign into the schools



(All names read left to right)

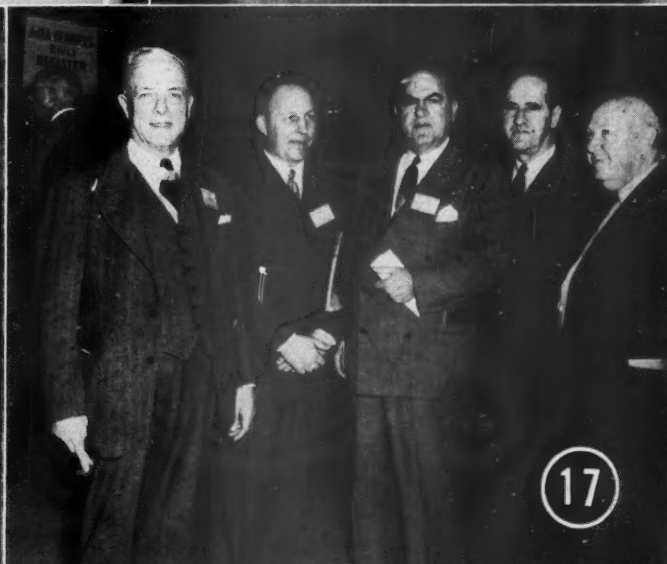
(1) J. P. Gallagher (N.Y.C.), Carl Bryant (Johns-Manville); (2) H. S. Loeffler (G.N.), G. M. Magee (A. A. R.), C. J. Code (P.R.R.); (3) W. C. Perkins (U.P.), J. L. Gressitt (P.R.R.); (4) G. J. Ray (D.L.&W., retired), F. S. Schwinn (M.P.), G. M. O'Rourke (I.C.), C. R. Wright (N.Y.C.&St. L.); (5) Newly-elected directors, A.R.E.A.—N. D. Howard (*Railway Age*), A. B. Chapman (C.M.St.P.&P.), I. H. Schram (Erie), C. E. Bronson (N.Y.C.); (6) R. P. Hart (M.P.), J. L. Loida (Ill. Term.), H. Austill (T.R.R.A. of St.L.), H. B. Barry (St. L.-S.F.); (7) E. C. Vandenberg, B. R. Meyers, B. S. Converse (all C.&N.W.); (8) A. R. Wilson (P.R.R., retired), C. P. Schantz (P.R.R.), F. R. Smith (Union); (9) H. T. Bradley, F. S. Schwinn (both M. P.), L. C. Fritch (C.R.I.&P., retired); (10) A. Chinn (T.R.R.A. of St. L.), A. C. Clarke (B.&O.); (11) E. Wise, Jr. (L.&N.), B. Blum (N.P.); (12) D. J. Brumley (I.C., retired), F. R. Layng (B.&L.E.), R. P. Hart (M.P.), W. J. Burton (M.P.); (13) C. H. Blackman (L.&N.), J. B. Akers (Sou.), J. L. Campbell (N.W.P., retired), E. M. Hastings (R.F.&P.); (14) C. H. Mottier (I.C.), presiding as president, A.R.E.A.; (15) C. K. Scott (Erie), R. L. Manion (G.N.), L. H. Laffoley (C.P.R.); (16) J. H. Kelly (N.Y.C.), E. L. Gosnell (Reading), E. A. Condit (Rail Joint Co.); (17) L. P. Kimball (B.&O.), J. E. South, S. R. Hursh, J. M. Fox, E. W. Caruthers (all P.R.R.); (18) A scene at the banquet—J. L. Gressitt (P.R.R.), Max K. Ruppert (P.&M. Co.), H. R. Clarke (C.B.&Q.); (19) F. G. Campbell, W. G. Mateer (both E.J.&E.), E. Bennett (Sou.).

(Other A.R.E.A. Convention Pictures will appear in the April issue of *Railway Engineering and Maintenance*)



SEEN BY A CAMERA AT THE A.R.E.A. MEETING

A few informal groups of engineering officers photographed at the convention, March 15-17 — A complete report of the business sessions appeared last week





HERE AND THERE AT THE N. R. A. A. EXHIBIT

Typical scenes in some of the booths at the Coliseum, Chicago, as the suppliers staged record display of products during the A.R.E.A. meeting

(All names read left to right)

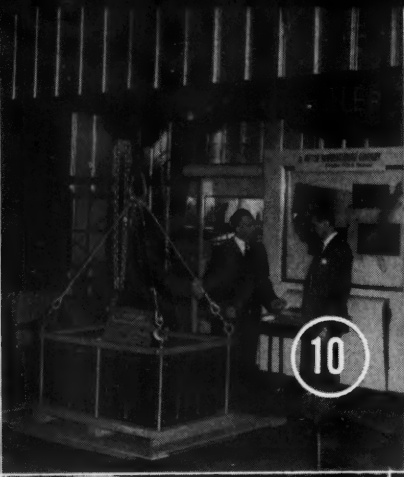


(1) Ramapo-Ajax division, American Brake Shoe Company—W. R. Rees (A.T. & S.F.), R. L. McAbee, H. Hazelton, Jr., J. J. Cannon (A.T. & S.F.), C. E. Godfrey, H. J. Moore (A.T. & S.F.); (2) Lehon Co.—W. H. Keleher (M.D.T. Corp.), A. C. Senseney; (3) American Hoist & Derrick Co.—J. F. Hartley, S. C. Brown; (4) Dearborn Chemical Co.—D. D. Powers, D. B. Bishop, W. H. Bockle, C. C. Rausch, E. R. Glover, J. F. Johnson; (5) Templeton-Kenly & Co.—K. E. Dunn (N.Y.C.), J. B. Templeton, J. L. Cox (N.Y.C.); (6) Barco Mfg. Co.—G. K. Fraser (C.N.R.), B. H. Ferguson (Holden Co., Ltd.), C. L. Mellor; (7) Armco Drainage & Metal Products, Inc.—W. H. Spindler, A. H. Baldwin, J. S. Loeffler, H. S. Claybaugh, E. T. Cross, B. T. Schwar; (8) Air Reduction Sales Co.—U. F. Portell, W. S. Hopkins, Jr., H. V. Stewart, C. A. Daley, L. C. McDowell, J. W. Kenefic; (9) Power-Ballaster Div., Pullman-Standard Car Mfg. Co.—J. M. Dubois, J. B. Rossen, J. W. Scallan, Fred Grant; (10) Butler Mfg. Co.; (11) White Mfg. Co.—W. McK. White, Jr., N. D. Bloom (A.T. & S.F.), W. McK. White, S. H. Haigh; (12) General Chemical Div., Allied Chemical & Dye Corp.—A. M. Dean, C. J. Casserly; (13) Taylor-Colquitt Co.—P. W. Nolin (Monon), W. E. Gadd; (14) Johns-Manville Sales Corp.—A. C. Pickett, F. C. Vandervort, J. R. Freal; (15) O. F. Jordan Co.—J. W. Risk (C.N.R.), R. S. Sabins (Cent. of Vt.), J. C. Forbes, H. M. McFarlane; (16) Eaton Mfg. Co., Reliance Div.—K. B. Little, A. H. Weston, E. J. Helline, H. S. Kirk (C. S.S. & S.B.), E. D. Cowlin, C. A. Esinhart, W. B. Moss, R. F. Golden, Fred Kimmel (Belknap Hardware Co.), S. E. Cowlin, F. K. Howell, E. C. Cross, Jr.; (17) Rail Joint Co.—H. L. Lansing, H. C. Hickey, E. A. Condit; (18) Rust-Oleum Corp.—J. C. Simmons, S. P. Berg (D.S.S. & A.), R. A. Fergusson, P. McKay (N.Y.C. & St. L.) (See April issue of *Railway Engineering and Maintenance* for other photographs taken at exhibit)





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PRINCIPLE OF EXTRA DAY'S PAY PENALTIES BEFORE CIVIL COURT

Court action initiated by a group of Pittsburgh & Lake Erie trainmen for an additional day's pay for coupling air hoses has ballooned to nation-wide proportions, possibly involving the "big five" operating brotherhoods and railroads comprising 97 per cent of the total Class I mileage. The decision of the court—expected within the next few months—may set a legal precedent as to the right of employees to claim an additional day's pay for any so-called out-of-assignment or out-of-craft work—frequently involving but a few minutes time. The plaintiffs premise their claims on what they say is custom and usage within the railroad industry; that the usual basic day provision applies where no specific penalty is provided.

Background of the Case

On June 19, 1943, the First division of the National Railroad Adjustment Board, "aided" by a referee, awarded two P. & L. E. yard helpers an additional day's pay on the basis of a finding that they had been required to couple air hose while switching in a yard in which carmen were employed, which constituted a violation of the road's air hose coupling rule, and for which it awarded an extra day's pay. The carrier paid the award. Thereafter, P. & L. E. trainmen began filing an increasing number of individual claims for an additional day's pay for coupling air hose. The carrier refused to pay these claims.

On October 13, 1943, the trainmen's general committee on the P.&L.E. met with the road's management to urge that the principle contained in the N.R.A.B. award—i.e., that each trainman required to couple air hose in violation of the air hose rule receive an additional day's pay—be applied generally on the road. As a result of these negotiations, the then existing agreement, dating back to 1928, was revised, and management agreed to dispose of all outstanding claims on a compromise basis, the claims to be filed within a set time. Some of the trainmen who are plaintiffs in the present proceeding filed their claims and received compensation according to the compromise formula; they now contend that the compromise agreement is not binding. Others failed to file their claims within the time limit and likewise argue that the compromise agreement and its time limitation do not preclude their claims. The carrier refused to set aside the compromise arrangement and the employees instituted civil suit in the federal district court. The trial ended with oral argument in October, 1948.

During trial, the court expressed some doubt as to the justice and equity of interpreting the usual basic day provision as a requirement that out-of-assignment or out-of-craft work should be compensated for on the basis of an additional day's pay. Apprised of

this circumstance, the Railway Labor Executives' Association apparently decided to make the case a proving ground for national application, and filed a brief, *amicus curiae*, in support of a proposition which they stated in these terms:

Where limits are provided by agreement as to the type of work which may properly be assigned to employees, when the agreement further provides that eight hours or less shall constitute a day's work, then, if an employee is required to perform work outside the limits fixed by the agreement, such employee becomes entitled to a day's pay for the time worked within the permissible limits of his employment, and a day's pay for the time worked outside those limits, provided there is no special provision in the agreement limiting his claim to a lesser amount.

The railroads thereupon filed a brief, also *amici curiae*, arguing against the "one violation, one day's pay" proposition. The carriers first underscored the fact that the plaintiffs claim an additional day's pay for coupling air hose on the basis of implications from the basic day provisions—not on an express penalty provision in the air hose rule. The carriers then argued that the basic day provision is not a penalty provision; that the facts relative to labor-management disputes at the time of the 1928 agreement, as evidenced by labor board proceedings, refute the claim that management impliedly agreed to pay such a penalty for air hose rule violations; and that labor's failure to claim such compensation for air hose rule violations until the early 1940's likewise disproves the claimed unexpressed agreement. The carriers further argue that awards by the N.R.A.B. do not establish a legal custom and usage; and that the featherbedding nature of the "one violation, one day's pay" principle and public antagonism to featherbedding make it highly improbable that railroad management ever impliedly agreed to such a principle. The carriers also analyzed the rationale underlying the proposition advanced by the labor executives and argued that it violates the provisions of the Railway Labor Act as well as elementary principles of contract law.

Few people realize the tremendous amount of research that is going on to make our railroads better and better. Research is being done not only by the railroads individually, and by the railroads collectively through the Association of American Railroads, but also by the manufacturers of railroad equipment and supplies. It's being done in laboratories, in shops, in terminals, in offices, even along the track—the real testing ground. Millions of dollars are being spent annually on railroad research, and today such activities are being conducted on a larger scale and on a broader front than ever before. —William T. Faricy, president, A.A.R., in a radio broadcast over station WLS, Chicago, on March 16.

NEW AND IMPROVED PRODUCTS OF THE MANUFACTURERS

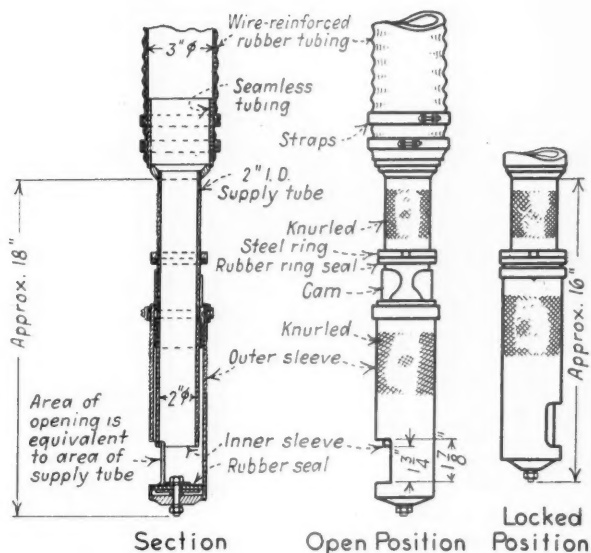
WINDSHIELD WIPER ARMS

A windshield-wiper arm, known as the Clear-View, has been designed specifically for the railroad industry by Sprague Devices, Inc., Michigan City, Ind. The arm is made of rust-proof stainless steel polished to a high luster and uses any conventional type of heavy duty blade. It will withstand up to 150 in.-lb. of torque.

The arm will fit any straight-end shaft. The tension is adjusted by a self-locking nut located just above the mounting head. No special tools are required to remove the arm from the shaft; it comes free when the locking nuts are released. The stainless steel mounting head block is a screw-tightened clamp which grips the 5/16-in. shaft with a vise-like action.

The wiper arm is available in two styles. In the conventional style the blade is fastened directly to the arm and gives a fan-shaped wiping pattern. The pantograph style is used principally for curved windshields where a greater percentage of window clearing is required. This style consists of the principal wiper arm plus a pantograph rod and a stationary flange which keeps the blade in a vertical position throughout its sweep and gives a pattern shaped somewhat like an arc.

The construction of the Roberts & Schaefer "Roto-Sleeve" Diesel sand valve



"ROTO-SLEEVE" DIESEL SAND VALVE

The Roberts & Schaefer Co., Chicago, has developed a valve, called the R. and S. "Roto-Sleeve," for delivery of sand to sand boxes of Diesel locomotives, which consists essentially of two seamless steel tubes, one of which telescopes on the other. The inner

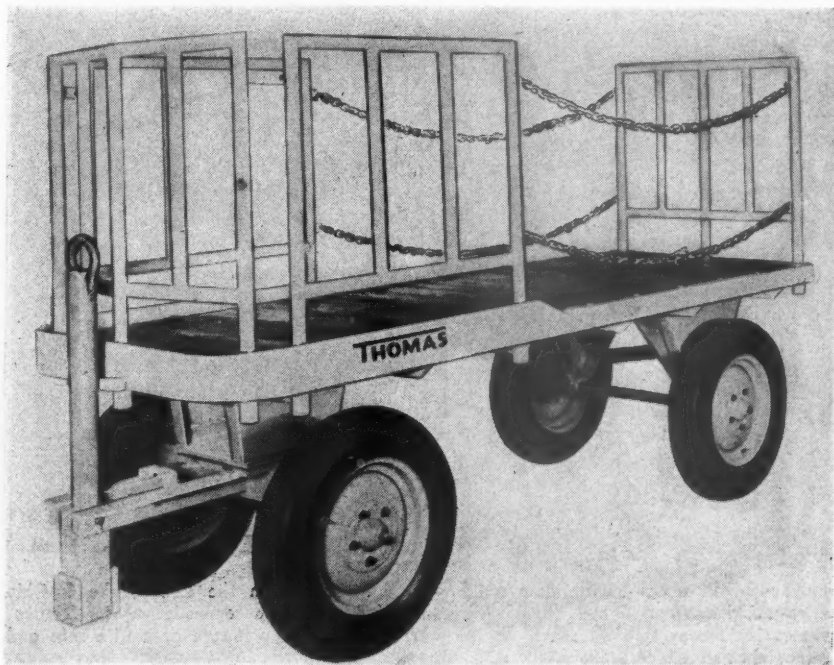
tube, or sleeve, is fixed to the sand hose, while the outer sleeve both rotates and slides on the inner.

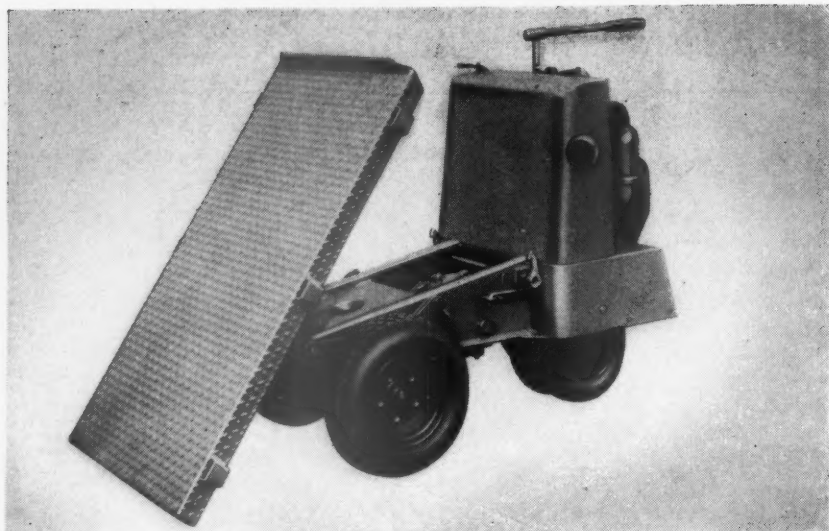
When the sleeves are in the retracted position, the valve is closed, and an easy twist of the outer sleeve in either direction locks it securely. To open the valve the outer sleeve is twisted in the opposite direction and then extended. This exposes a side opening, with an area about equal to the area of the

NEW BAGGAGE TRAILER

A new baggage trailer of 4,000 lb. capacity has been announced by the Thomas Truck & Caster Co., Keokuk, Ia. The truck frame is built of 3-in. steel angle irons, while decking is hardwood, 1 in. thick. The deck height is 35 in. from the floor and deck dimensions are 43 in. by 122 in.

Wheels are of the solid type and designed for pneumatic tires—with tube—size 6.00 by 16. The wheels are equipped with Timken roller bearings in the hubs, while the front fifth wheel (not visible in photo) is ball bearing type, with Timken thrust bearing on the kingbolt. The tongue of this wagon has a ring grip and is designed to engage the pin-type coupler of truck or tractor ahead. Tongue is counterweighted so that it returns to the vertical when disengaged. End and side racks can be fixed or removable.





The Moto-Bug has a 33-in. by 48-in. tilting platform which is interchangeable with a hopper body

supply opening through which the sand is delivered to the valve.

Because the outer sleeve can be rotated when in the extended position, the valve opening can be turned into any service position desired. The valve is said to be non-clogging and weather sealed. It can be furnished for supply lines ranging from 2 in. to 3 in. inside diameter.

BURDEN-CARRYING TRUCK WITH TILTING PLATFORM

The Kwik-Mix Company, Port Washington, Wis., a subsidiary of the Koehring Company of Milwaukee, has introduced new features on its Moto-Bug, a 1,200-lb. capacity gasoline-

powered truck for handling loose loads, skids and bins. The flatbed platform, equipped with six stake holes, may be tilted for unloading heavy bulk materials. The flat platform is easily interchanged with a hopper body which, in effect, makes the Moto-Bug a power wheelbarrow. Its width is 33 in., and it is designed to turn in its own length on dual rear wheels controlled by a direct steering mechanism. An optional riding step for the operator is available.

All wheels are equipped with traction-tread pneumatic tires. Speeds in both forward and reverse directions are from 1½ to 4 m.p.h.

FAST FLOWING DIESEL SAND VALVE

The Ross & White Co., Chicago, is offering a new model of its "B & M" sand valve, designed to speed up the delivery rate of sand to the sand boxes of Diesel locomotives. The valve has a discharge opening 3 in. in diameter, and its inlet end can



The Budd-built coach-lounge cars which went into service on the Chesapeake & Ohio between Chicago and Grand Rapids, Mich., last fall, provide accommodations for 36 passengers in "Sleepy Hollow" seats. At the rear of the car is a lounge area with sofa and leather-upholstered club chairs



The Ross & White 3-in. B & M Diesel sand valve

be inserted in a 3-in. steel-reinforced flexible hose and clamped in position. It is reported that the valve, operated by a lever, does not leak nor open by itself, and that sand dust will not "stick" open nor prevent it from being opened at any time.

ILLINOIS ADVISED TO MAKE HEAVY TRUCKS "PAY OWN WAY"

Early in 1948, the state of Illinois hired a private engineering firm to study the needs of its highway system and to recommend means of raising funds sufficient for its improvement and continued upkeep. The result of this study, recently released, is a 500-page comprehensive report which—

(1) Throws stiff punches at the relatively small fees paid by large trucks for the privilege of using the highways, as compared with the lighter truck and passenger automobile;

(2) Suggests that license fees on heavy vehicles be assessed according to weight of vehicles and the miles they travel—the so-called ton-mile system—with credits for motor fuel payments;

(3) Recommends that the state's gasoline tax be increased from 3 cents per gallon to 5 cents;

(4) Attacks the continued increase in sizes and weights of vehicles, declaring it "must stop if the highway deficiencies are ever to be eliminated";

(5) States that primary roads should be paid for entirely out of taxes paid by highway users;

(6) Points out the need for systematic enforcement of maximum weight laws; and

(7) Asserts that no part of the highway program should be financed by bond issues, but that the state's share of the cost should be raised by increasing licensing fees and the gasoline tax.

The report, "A Highway Improvement Program for Illinois," was prepared by Griffenhagen & Associates, consultants in administration and finance. Much of the data is based on material gathered by the highway department through various state highway agencies. The facts contained in the report are to be used by the Illinois Highway & Traffic Problem Commission in recommending a new highway program to the state legislature.

Ton-Mile Tax Recommended

Regarding the ton-mile basis of taxing heavy vehicles, the report states: "In spite of the general acceptance of the motor fuel tax as a good basis for highway taxation, it leaves something to be desired as a measure of relative highway use, especially as among vehicles of different weight classes. Although the heavier vehicles consume more fuel per mile than do the lighter vehicles, and thus pay a higher tax for each mile traveled, they consume less fuel per ton-mile than do the lighter vehicles and thus pay a lower tax per ton-mile. . . The lightest weight vehicle, on the basis of estimates, bears a tax of 11 cents per 100 ton-miles, whereas the heaviest vehicle bears a tax of only 3 cents per 100 ton-mile. The light vehicle pays over 3½ times more in motor fuel taxes per ton-mile than does the heavy vehicle."

The report points out that the ton-mile tax cannot be applied to passenger cars and light trucks because accurate mileage records cannot be obtained. The engineers were of the opinion, however, that such a tax on heavier vehicles would offer no more inherent

PRESENT AND PROPOSED TRUCK FEES

3,000 and less	\$10	\$25
3,001—8,000	12	25
8,001—10,000	24	55
10,001—12,000	35	85
12,001—14,000	50	105
14,001—16,000	75	130
16,001—20,000	110	200
20,001—24,000	150	325
24,001—41,000	250	650
41,001—45,000	275	815
45,001—50,000	300	975
Over 50,000	350	1,220
Buses over 24,000	200	500

difficulties of administration than an income tax or a general property tax. The report suggested that, until the ton-mile tax could be adopted, the state should rely on straight motor fuel taxes and annual flat-weight license fees.

In this connection, it was recommended that truck license fees be increased so as to range from \$25 to \$1,220 and that the fee for all passenger cars be placed at \$12.50. For example, the annual fee of \$35 now charged for a 12,000-lb. truck would be increased to \$85 in accordance with flat fees worked out on a theoretical average weight and travel scale. Buses weighing between 24,001 lb. and 36,000 lb. would be charged \$500. These increased license fees, together with the higher gasoline tax, are calculated to raise approximately \$160,000,000 yearly, or about \$85,000,000 more than is collected from these sources at present.

Truckers Violating Weight Laws

The engineers' report also charged that overloaded trucks are using Illinois highways "almost without restriction." On this point, it stated: "The failure to enforce legal road limitation on commercial vehicles is causing unreasonably rapid deterioration of road surfaces. It is neither economical nor desirable to have highway facilities become functionally obsolete a few years after they are built, simply because trucks are built heavier and larger and because vehicles can travel at higher speeds."

The state police should give adequate attention to policing highway transport trucks for weights and speeds, or a separate police force should be created within the highway division, continued the report. Systematic enforcement of maximum weight laws was recommended, with immediate arrest of violators, removal of excess weight, and an increase in fines to \$500 for the first offense and to \$1,000 for succeeding offenses. Loadmeter surveys by the division of highways in 1945 disclosed that 15 per cent of the trucks were overweight for the registration class indicated by their license plates. "It has been conservatively estimated," the report continues, "that the state lost as much as \$7,500,000 from 1936 to 1945. . . . The loss may have been twice as much, or even greater."

Communications . . .

"The Public Will Have to Pay"

GORHAM, ME.

TO THE EDITOR:

An advertisement sponsored by the Eastern Railroads, published in some of the newspapers in this section, tells the public of the demands the Brotherhood of Locomotive Engineers and Brotherhood of Locomotive Firemen and Enginemen have made for more men on Diesel locomotives. These demands must be about the most outrageous demands labor unions have ever made, as I read these railway unions have threatened to strike if the railroad managements do not surrender to these brotherhoods.

In their controversy, if the ruthless brotherhood chiefs succeed in clubbing the railroads into carrying on the railroad payrolls twice as many engineers and firemen on the Diesels as are needed, what will A. F. Whitney of the Railroad Trainmen's union demand? Will he demand only an extra conductor and an extra brakeman for every one now on the railroad payrolls?

Eventually the public will have to pay for this in freight and passenger rates. Is it fair that they should be forced to pay the wages of double the number of highly paid men needed? Also, it would seem reasonable that securities that furnished the money to build the railroads should receive something. The investors of a large part of the nation's railroads will surely have their securities depreciate to little value if leaders of the railroad employees' brotherhoods can get away with a raid on railroad revenues like this one.

I wish your influential periodical would advocate legislation making it the duty of the Interstate Commerce Commission to pass upon the reasonableness of railroad wages and working schedules, with the power to veto what is unjust to the public. And we should promptly have legislation making railroad strikes illegal. The ruthless chiefs of the operating brotherhoods should have the power to loot the railroads taken from them.

RALPH C. STONE

Another Canal?

KANSAS CITY, MO.

TO THE EDITOR:

The recent proposal that the federal government appropriate funds for a \$100,000,000 Illinois-Mississippi canal is in direct opposition to the principle of balance in the economic order. It would contribute to a further unbalance of trade and production opportunities, favoring one locality at the cost of the remainder of the country.

This proposed new waterway would be far-reaching in its effects politically, economically and from the standpoint of national defense. Should this canal project be put through it would work a hardship of a competitive nature on thousands of industrial organizations. These organizations were created by private investment, to the extent of thousands of millions of dollars in capital growth and accumulation. This investment over several generations would have no consideration in the construction of this canal, from which few would reap benefit.

How would such a canal between the Chicago area and the Mississippi river affect our national defense? Our leading military minds, outstanding statesmen and economists have warned against industrial centralization. It has even been suggested that it may be necessary to forcibly break up concentrations of our industrial plants and scatter them about the country in order that we might sur-

vive an atomic war. The Chicago area which the proposed canal would favor is already an industrial knot on the natural waterways of the Great Lakes. The canal would intensify this concentration.

Let us combine to defeat this unwholesome measure. Our lack of interest in the past in defeating proposals which would be detrimental to our general welfare has applied the brakes to our progress. This fault of the human race antedates chronology. It is now high time that we change and recognize the things that hold us back so we can go forward and protect our future accordingly.

C. J. HUNNICUTT
Vice-President
G & H Rail Controls, Inc.

Are Bigger Train-Heating Boilers Really Necessary?

MINNEAPOLIS, MINN.

TO THE EDITOR:

At the Locomotive Maintenance Officers Association meeting in Chicago last year, a discussion was held on train heating boiler maintenance and cost (more and larger boilers were mentioned). Steam heating was discussed at the Car Department Officers Association meeting at the same time but at neither meeting did any one raise the questions: "Are these extra boilers really necessary?" and "Can't we possibly save a little steam somewhere on the cars?"

An article appeared in the *Railway Age* a few weeks ago containing such final statements as (a) "a well constructed and insulated car will use from 250 to somewhat over 350 lb. of steam per hour"; (b) "a train running at high speed must have sufficient supply of steam to give a minimum of 20 lb. per sq. in. in an insulated car to heat it"; (c) "fewer cars should be handled during severe winter weather"; (d) "additional steam should be made available through the use of rear-end heater cars"; or (e) "additional capacity should be obtained by adding to the boiler in the Diesel locomotives."

The full import of these statements is staggering. Some losses must be expected but a car should not require 250 to 350 lb. of steam an hour when the heat loss of a car and the installed heating capacity of most cars are so far below these figures. This 250 to 350 lb. steam is not getting to the passengers in the form of useful heat. It could be that some of this steam is being wasted in under-car piping and unnecessary under-car equipment, heating the great outdoors. A recent impartial test conducted by two railroads (and being widely discussed at the moment) tends to bear out that under-car equipment and piping may be two of the "steam thieves."

In a standing one-hour test, a modern conventional car at 6 deg. above zero used 106 lb. of steam, or 44 lb. more steam than the 62 lb. used by a car with simplified under-car piping. It seems logical that at high speeds the car with the extensive under-car piping and equipment would increase its steam waste to a greater degree than the car with the simplified piping, because of the wiping action of cold air over the piping and equipment. This single test is, of course, not conclusive, but the trend is unmistakable.

A car with simplified piping and under-car equipment also should require less pressure at the car than the conventional design, since many ports, orifices, loops, etc., contributing to pressure drop are eliminated. This alone might mean "heating the last car."

The train line and connectors are, of course, recognized "steam thieves" that we all would like to control by improved connectors and insulation. However, if we used a



Two-way radio on this yard locomotive allows the engineman to converse with the yardmaster

little less steam on each car, the job of the poor over-worked train line might not be so impossible—even without increasing pipe size.

Now, for an economic discussion of the problem. The maintenance cost and equipment cost of head-end steam generating equipment is already recognized as a burden. The addition of more or larger boilers is a step we should consider well in these days of severe competition and mounting operating costs. The mere mention of rear-end heater cars might bring on rather high blood pressure on the part of operating or mechanical officers. The fact that we must limit train lengths in cold weather, and thereby shackle the possible return from our tremendous investments in Diesel-electric locomotives, should indeed suggest that we should not leave a stone unturned in our search for steam waste wherever it occurs in the train.

I believe that all suggestions for boilers on the ends of trains, more boilers, larger boilers, larger steam train-lines, need for greater pressures, are only in order after waste of steam in under-car piping and equipment is well studied and reduced where possible through the elimination of exposed under-car equipment and the simplification of under-car piping. We cannot—we dare not—burn the candle at both ends.

MAURICE R. EASTIN
Minneapolis-Honeywell Regulator Company

A "Plug" for Radio "Commercials"

TO THE EDITOR:

CROTON-ON-HUDSON, N. Y.

In my opinion railroad advertising is far behind the times. The majority of railroads use the same type ads as they did in the days when they had no buses, planes or private autos with which to compete. In fact some roads advertise much less than they did in those days. Most of today's railroad advertisements play up the best trains, neglecting to mention the lesser known trains, branch line and commuter service.

Only one railroad that I know of has taken advantage of a rather new method of advertising, the short trans-

cribed radio commercial. That road is the Hudson & Manhattan. This method of reaching the public is claimed by many to be annoying, but when people hear something pounded at them over and over again, they will purchase that product or service without thinking.

The railroads could use this form of advertising to their advantage. They could use a musical jingle giving the telephone number where train information is obtainable. Also play up the hopeless traffic and parking situation in large cities where congestion is a problem. Another style which could be used in this form of advertising is to announce a particular train on a particular line and have it read something like this: "Do you plan to visit your relatives or friends next Sunday in Blank City? Train No. 999 leaves Blankville at 10 a.m., stopping at (and the towns it stops at), arriving at Blank City 11:30 a.m. in plenty of time for dinner. Returning take the 9:30 train; it has reclining seat coaches for a restful ride home." Make a whole series of this type of transcription for various trains and lines of the railroad for use on the morning "disc jockey" program. Practically everyone listens to these programs to get the weather reports, correct time and latest morning news.

The railroads have neglected their dining service in advertising. A traveler seldom knows how much a meal will cost until he sits down in the diner and picks up the menu. Consequently he is hesitant about availing himself of this service. The prices of meals as well as complete menus should be publicized more through advertising and railroad literature. Many people have the mistaken idea that dining car meals are priced "out of this world." I've found that to be entirely false. Few people seem to know that a dinner on board a train costs about the same as one in any of our better type restaurants and in some cases less.

E. ALFRED SEIBEL

New Book . . .

INDUSTRY-WIDE BARGAINING. By Leo Wolman. 63 pages. 6 in. by 9 in. Bound in paper. Published by the Foundation for Economic Education, Irvington-on-Hudson, N. Y. Price, fifty cents.

Mr. Wolman, who is well-known in the field of labor relations, traces the growth of unionism in the United States. As a result of its phenomenal growth since 1935 there has developed the practice of industry-wide bargaining with its resultant labor monopoly. "The several hundred national unions of the contemporary American labor movement can," he says, "if they adhere to the traditional policy of taking labor out of competition, effectively monopolize the labor market for major economic activities of the United States. And taking labor out of competition will amount in time to taking business out of competition."

The setting of industry-wide wage patterns in place of long-standing wage differentials in favor of plants situated in small towns and rural communities, will, he predicts, eventually lead to fewer jobs. Mr. Wolman discusses joint union-employer monopoly which he says results in joint price fixing to exploit the customers. He further points out that the national union infringes upon the right to manage, strives to restrict output, drives the employee and employer apart and is an invitation to government control. In conclusion he points out that the decision as to future labor policies is still open in the United States, and as remedies to present conditions he suggests the removal of special privileges and the withdrawal of labor immunity to anti-trust laws.

"GIVE-AWAYS" THREATEN RAILROADS' FUTURE

The following paragraphs are abstracted from an address by W. G. Vollmer, president of the Texas & Pacific, at the March 18 meeting in Galveston, Tex., of the Southwest Shippers Advisory Board.

The American railroad industry, as it stands today, presents a critical and paradoxical situation. It is critical because the political and economic conditions of the nation are forcing the industry steadily down the road to federal ownership. Unless the trend is arrested, the day will come inevitably when the railroads can survive no longer as a free enterprise system.

It is paradoxical because the peacetime operating revenue of the railroads was never higher, its capital expenditures never larger, its equipment and facilities never more modern and its operating efficiency never better, yet despite all these accomplishments the industry finds itself in difficulty.

The political and economic conditions which have created the critical situation in which the railroads find themselves may be attributed to several basic factors; namely, (1) excessive regulation and taxation, (2) increased cost of materials, supplies and wages and (3) subsidized competition.

The impact of these forces has brought about an inadequate rate of return upon capital investment, thus largely shutting off from the industry the supply of venture or risk capital. This has made it necessary for the industry to devote an ever-increasing proportion of its net income to the improvement of its plant, which has left a constantly shrinking proportion for the stockholders.

No other industry is subject to such a variety and volume of regulations, as well as state and federal legislative action, as are the railroads. They are controlled by the Interstate Commerce Commission with respect to such operating factors as rates, service, safety, abandonments, acquisitions of properties, and the raising of capital funds, while wage rates and working conditions are governed by procedures laid down in the Railway Labor Act.

In addition to these federal regulations and controls, the intrastate operations of the railroads are subject to a variety of regulations and controls in each of the forty-eight states of the nation.

No other industry, and certainly no competing form of transport, is subject to such a wide variety and volume of taxation as are the railroads. It is the only industry upon which the Congress, by federal statute, has imposed a payroll tax of 6 per cent for employee retirement purposes. The competing forms of transportation are subject to the Social Security tax of 1 per cent, which gives them at the outset a cost advantage of 5 per cent upon their payrolls, which is an important consideration in the establishment of their rates and fares.

Additionally, the railroads of the nation are subject to taxation on rights of way, terminal properties, rolling stock and corporate earnings. In short, the rates charged for rail services are expected to cover all costs and also furnish substantial revenues for the support of federal, state and local governments. Total such payments to these several governments in 1947 amounted to more than \$936,000,000.

No other industry, national in scope, has the selling price of its service so closely regulated as do the railroads. Unlike other industries, the railroads cannot increase their rates on a nation-wide scale except by permission and authority of the Interstate Commerce Commission and the regulating bodies of the forty-eight states. This involves the time-consuming hearings, frequently running into

months, which result in heavy revenue losses to the industry.

No other industry is called upon to meet such formidable subsidized competition as are the railroads. For years this competition, which consists of the commercial truck and bus lines, air lines and inland waterways, has been heavily subsidized by local, state and federal governments. These subsidies take the form of fixed plants such as a vast network of magnificent highways, hundreds of expensive air terminals, with beacons and weather reporting services, and improved inland waterways costing millions and millions of dollars, all of which facilities have been built, and are being maintained, at the taxpayers' expense. These three modes of other transport thus find it unnecessary to make heavy capital investments to provide the basic facilities of their trade. They need only provide the vehicles used in the conduct of their businesses.

The trade publication, *Railway Age*, takes the pulse of the national trend toward "give-aways" in the transportation industry with a frank diagnosis. *Railway Age* remarks editorially that not only are respected private corporations—the kind some of you may work for—practicing and advocating socialism all over the lot, but the victims of their transgression are too timid to turn the spotlight on the offenders. By victims, *Railway Age* means the railroads. By offenders, the magazine means the auto builders, the steel makers, the big food processing companies, and many others who condone the "give-away" tactics toward trucks, ships and airplanes by patronizing them.

I agree with *Railway Age*. It's foolish to be timid. I'm not.

Another "give-away" recipient, the commercial air lines, are supervised by the Civil Aeronautics Administration, in the Department of Commerce. Fixed properties, such as airports, beacons, meteorological services, etc., are provided by the taxpayers through the use of federal, state and local funds. The Civil Aeronautics Board, which controls fares, route patterns, capital issues and matters pertaining to safety, is authorized by law to protect the annual revenues of operating airline companies by adjustment in payments to them for carrying mail.

Like the commercial truck and bus operators, the commercial airlines have their costly fixed plants provided and maintained by the general public which means, in effect, that the taxpayers are underwriting a proportion of their legitimate operating costs. Here again the railroads' competitors are given an advantage which enables them to establish an artificial scale of rates and fares which does not reflect all operating costs and thus a substantial volume of traffic is diverted from the railroads.

The service which each form of commercial transport renders the nation, *without benefit of subsidy*, should be the measure by which it justifies its existence. The economic progress of our nation cannot continue as a sound and dynamic force if a basic industry such as the railroads is oppressed through subsidies to competing forms of transport. And that is precisely what is happening, for we are systematically and progressively destroying the railroad industry as a free enterprise system.

It is vitally important to the stockholders and the employees of the railroads, to all business and industry generally, and to the nation's well-being that the railroads survive as a free enterprise. Once they become federally owned, the forces of socialism will move to capture other basic industries.

GENERAL NEWS

Good Loading Could Keep Orders Stayed

Voluntary efforts might bring that result, Gass advises

All who desire further suspension of the heavy-loading orders of the Office of Defense Transportation and Interstate Commerce Commission should continue their efforts for conservation of equipment through heavier loading on a voluntary basis, Arthur H. Gass, chairman of the Car Service Division, Association of American Railroads, advised in his latest monthly review of the "National Transportation Situation." The orders, which were suspended from February 14 until April 16, are O.D.T. 18A, the minimum-loading order for carload freight and I.C.C. Service Order No. 68, which prohibited the furnishing of two small cars for a larger car ordered and suspended tariff provisions that permitted application of minimum weights lower than those permitted for cars used.

In the absence of further action by the O.D.T. and the I.C.C., both orders will be automatically reinstated on April 16, Mr. Gass pointed out. "No intimation," he continued, "has been given as to whether the suspension will be further extended or allowed to expire, but it is believed that the O.D.T. and I.C.C. will decide this early in April based upon the general freight car situation existing at that time." It was in view of this prospective consideration of the matter that the C.S.D. chairman advised continuance of the voluntary arrangements, which, he added, "might well result in avoiding a necessity for reinstatement of the orders."

Mr. Gass' discussion of equipment conditions by types of cars noted first that there had been a "noticeable spurt" in demands for the better-class box cars since the time of his previous review. Cumulative loadings of grain and grain products during the 9 weeks ended March 5 were 4.4 per cent above those of the comparable 1948 period, while total box-car loadings during the first 8 of those weeks were off 10.3 per cent. During the week ended March 5, there was a daily average surplus of 15,834 box cars and a shortage of 227 cars; for the same week last year, shortages averaged 4,445 cars while the average daily surplus was only 1,980 cars.

Because another "bumper" wheat crop is in prospect, Mr. Gass said that it will be necessary next month to start building up the supply of box cars on

the principal southwestern grain lines. Meanwhile, he reported that the Department of Agriculture had found itself unable to go along on a railroad-proposed plan whereby wheat stored under loan and purchase agreements would have been cleared out of interior warehouses and moved into terminal storage in advance of April 30, which is the date loan and purchase contracts expire. While the department took the position that it could not move the wheat which does not yet "legally" belong to the government, it did agree that paper work in connection with the matter would be rushed. Thus orders for movement can be issued promptly upon expiration of the contracts, Mr. Gass explained.

"The box car supply," he added, "will be severely taxed in the event wheat under loan and purchase agreement moves concurrently with the new crop which will be ready for cutting in the latter part of May. However, it has been gratifying to note the increased loadings of grain and grain products during the past few weeks which will, if continued, help the situation materially."

Noting that coal loadings during this year's first 10 weeks averaged about 18½ per cent below loadings for comparable periods of the three previous years, Mr. Gass estimated that production of approximately 15 million tons of bituminous and 2 million tons of anthracite would be lost as a result of the suspension of mining ordered by President John L. Lewis of the United Mine Workers for the period from March 14 to 26. The C.S.D. chairman went on to recall, however, that production lost during "limited" suspension periods of the past has "usually been made up by heavier output and stimulated demands for cars during the balance of the year."

Principally because of the falling off in coal production, the supply of hopper cars "is comfortable on all lines with considerable surplus on many of the heavy coal producing railroads," Mr. Gass continued. As to gondolas, he reported that, while loadings have been below those of last year, the heavy steel production has maintained a constant demand for this class of equipment, particularly the mill type. Thus, "it has been necessary to maintain a steady

REFEREE REINSTATES RULE G VIOLATORS

A yardman employed by the Southern, who was dismissed on July 10, 1947, for intoxication on duty, has been ordered reinstated with seniority rights unimpaired by Referee George W. Blattner for the First Division of the National Railroad Adjustment Board—but the claimant's petition that he be paid for the time lost since his dismissal was denied. Mitigating circumstances cited by the referee to justify his leniency were (1) the "good grace" of the complainant in thanking a railroad officer who admonished him on a previous occasion when he was allegedly drunk on duty and (2) testimony by a foreman that the complainant was "hard-working."

In a dissenting opinion by railroad members of this division of the Adjustment Board, it was pointed out that, in Vermont, if a railroad should restore to service an employee with such a record for drunkenness on duty, the railroad would be subject to a fine of not less than \$300 nor more than \$3,000; and that, in Michigan, a railroad giving employment to a man with such a record would be penalized by a fine of \$500. In West Virginia or Missouri, train service employees themselves who are drunk on duty are subject to fine or imprisonment. The railroad board members drew attention to various

laws on the statute books calling for maintenance of prescribed standards of safety in railroad appliances and for periodic inspection of their appliances to assure adherence to these standards, but they note that Congress has neglected to provide parallel safeguards to assure the dependability of the human factor to whom the functioning of these appliances is entrusted.

In the case of a Reading conductor, dismissed for alleged Rule G violation, Referee Blattner ordered the complainant reinstated with full seniority rights, but without pay for time out of service. The petitioning employee admitted his violation of the drunkenness-on-duty rule, but the referee decided to deal leniently with him in view of the complainant's contention, which was not contradicted, that no similar charge had been made against him previously in 26 years of service.

In another case, involving a St. Louis-San Francisco brakeman dismissed for drunkenness, who "more than this, had a bad court record on drunkenness," Referee Blattner remanded the case back to the railroad for further investigation. In this case, the railroad members of the First Division went along with the referee, while the union members expressed their dissent.

flow of empty gondolas into steel producing areas to prevent shortages."

Of the plain-flat-car situation, Mr. Gass reported that requirements have been increasing, resulting in a "tight" supply of long cars but "no serious shortages." Meanwhile, there has been no relaxation in demands for flats of special types, and the C.S.D. chairman stressed the necessity for handling such equipment "as expeditiously as possible." As to covered hoppers, he reported that there has been a recent surplus, which he expected to be absorbed as spring construction gets under way.

With respect to refrigerator cars, Mr. Gass said that the problem of meeting requirements had become more difficult this month. The railroads are making "persistent efforts" to supply all territories, he added. Among such efforts are the activities of A.A.R. field forces which are checking and reporting delays in the releasing of refrigerator cars and making special appeals to consignees to make prompt releases of equipment.

In his analysis of equipment-production data, the C.S.D. chairman found it "interesting to note" that the 104,000 new freight cars placed in service during the 12 months ended March 1 were "largely offset" by retirements of 84,000 cars. He went on to point out that this net gain in ownership of about 20,000 cars "was in turn offset by an increase of 12,000 bad order cars, whittling the gain in serviceable cars to 8,000." Nevertheless, Mr. Gass added, "the installation of 104,000 cars in the past year and nearly 180,000 in the past two years has greatly improved the physical condition of the rolling stock."

Average turn-around time for freight cars was 17 days in February, compared with 16.62 days in January. The number of cars detained beyond the free time averaged 16.05 per cent of the total placed in February, compared with 16.86 per cent in the previous month and 16.02 per cent in February, 1948.

"Untie" Railroads, Asks New Haven President

**Need for flexibility in pricing,
regulation told by Whittemore**

Laurence F. Whittemore, president of the New York, New Haven & Hartford, this week characterized the railroads as a "giant which can be safely untied" and which should be allowed enough flexibility in regulation, pricing its products and in changing its practices to enable it to prosper in those places where its survival as the great producer of mass intercity transportation is a public necessity. Addressing the Western

Railway Club in Chicago on March 21, Mr. Whittemore observed that such an "unshackling" of the carriers would enable them to meet competition and the rising costs of wages and materials.

The speaker pointed out that the railroad industry has lost, and is still losing, almost every aspect of monopoly, and is becoming a giant beset by several lusty competitors. These competitors, he said, are not regulated in the same degree, if at all, but are in fact subsidized in various ways and for various reasons, some good, and others doubtful. All types of transportation must be free to change rapidly and no one type can exist "half-slave and half-free," declared the New Haven president.

"The railroad industry finds itself not only hampered in its efforts to meet changed conditions and competition, subsidized or otherwise," said the speaker, "but in that acknowledged condition cannot attract the equity capital necessary to modernize and change fast enough to meet the situation. The fact that there are some railroads in favored situations which can attract equity capital does not alter the fact that many of the railroads serving the largest centers of population and production are not in that happy situation even at this time of relatively high general prosperity."

Further restrictive regulation of air lines and motor vehicles will not substantially improve the competitive opportunity of the railroads, Mr. Whittemore said, adding that "it seems crystal clear that a feasible method of obtaining the benefits of equalized opportunity is to unfetter the railroad industry in regard to, among other things, taxes which its competitors do not pay in the same degree."

Depreciation Allowances Not Realistic

"As the railroad industry moves toward complete modernization of its plant it becomes evident that the depreciation allowances approved by the Interstate Commerce Commission and the tax authorities based on original cost are not realistic. There is a crying need for a new measure of depreciation which recognizes replacement cost rather than original cost. As it is now, replacement cost is roughly twice the original cost of much railroad equipment and the difference has to be made up out of net income on which a substantial federal tax has been paid."

In illustration, the speaker said that, on his road, depreciation fell short of the cost of replacing passenger coaches by some \$900,000. Because of federal income taxes, the New Haven had to accrue \$1,400,000 to meet this difference.

Mr. Whittemore attacked regulation which requires the railroad to perform services unprofitably which can be performed more efficiently on the highway. If this condition did not exist, he said, "it is questionable whether as much of a rate increase on the mass interstate

traffic of the railroads would be necessary in many instances . . ."

Monopolistic Thinking in Field of Labor

At another point, the speaker observed that "the attitude of labor is the only field of railroading where monopolistic thinking still exists . . . It would seem to me that persistence in requirements of payment for work not done will end in the sons of railroad men becoming truck drivers."

"On the part of management the requirement is for more ingenuity, more attention to technological improvements and more anxiety to meet situations by lower costs and improvement of service. Speed of response to changing conditions and situations demands decision and vigorous implementation."

"The past, interesting and enthralling as it is, does not now constitute the guide for the future which it once did, and the time has come for new thinking, not only on the part of railroad management and railroad labor, but on the part of railroad ownership, railroad regulators, and the public at large; not forgetting the Congress of the United States . . ."

Sees Railway Labor Act At "Age of Impotence"

**Brown advises Great Lakes Board
to "sell idea of self-reliance"**

"There are more and more signs that the Railway Labor Act has reached the age of impotence," Andrew H. Brown, traffic commissioner of the Cleveland, Ohio, Chamber of Commerce, warned the Great Lakes Regional Advisory Board at its 26th annual meeting at Detroit, Mich., on March 16.

"We have ground for the suspicion," Mr. Brown said in his report as chairman of the board's legislative committee, "that railroad labor feels that trains are run for their comfort and amusement rather than for the safe movement of persons and goods."

"Every session of Congress sees continued attempts — frequently successful and sometimes with the connivance of railroad management — further to establish a cradle-to-grave paternalism in rail transportation. Don't think for a minute that that current can be confined. The railroads were first, but the rest of us are next. How long has it been since there was a Congress which did not receive a suggested bill to make our fundamental transportation agencies a football of rational politics, and — more than incidentally, I fear — to create a new host of bureaucratic pests?"

"The fact is that we have honest and dishonest, and very able, men in this country who are steadily pushing our transportation agencies under the

full and autocratic power of the federal government. The ablest and less honest of these know that the inevitable result would be the fully socialistic state and that is what they are working toward.

"Time Out to Observe"

"I propose that each of us take time out to observe the entire field of transportation and do a little thinking of our country as a whole, where we seem to be going and how we can change our course. . . . We in transportation are key men. It is our duty to maintain ourselves free and independent. When we are hurt in competition we must squeal less and do more. We must help sell the idea of self-reliance to others who cannot see the dangers which face all of us."

Mr. Brown also said that the railroads "not more than existing on present rates and traffic volumes," "must soon reach the point, if they have not already done so, where each rate increase means less net revenue."

George T. Christopher, president of the Packard Motor Car Company, speaking at the board's closing luncheon, described as "a major essential" a vigorous modernization program by the railroads to lower transportation costs. "We in the auto industry, here in Detroit," Mr. Christopher said in part, "are too far away from centers. . . . We

are trying to bring down costs, particularly of labor, by mechanization. You must bring down the other major cost, transportation, in our product. . . . Unless that happens Detroit will sometime be faced with the great problem of industrial decentralization."

Present Trend "Only Temporary"

W. E. Callahan, Open Car Section, Car Service Division, Association of American Railroads, in a report on car supply, told the board that "Our economic experts indicate that the present trend is only temporary and that we shall shortly resume peak freight movements, accompanied by heavy demands for equipment." A 3.9 per cent increase in car loadings in the board's area in the second quarter of 1949 as compared with the same quarter of 1948 was predicted.

Officers elected by the board were: President, R. W. Wettstyn, general traffic manager, Firestone Tire & Rubber Co., Akron, Ohio; vice-president, C. J. Davitt, general traffic manager, Budd Company, Detroit; executive committee chairman, N. J. Beez, traffic manager, Jennison Wright Corporation, Toledo, Ohio, and general secretary, J. A. Jacobson, assistant traffic commissioner, Chamber of Commerce, Cleveland (re-elected).

Freight-Car Steel Allocations Drop Sharply, Sawyer Reveals

Allocations of steel in June for freight cars total 174,953 tons, a 72,923-ton decrease under the February allocations of 247,876 tons, Charles Sawyer, Secretary of Commerce, said at a press conference in New York on March 23. Mr. Sawyer attributed the decrease to the recent decline in railroad freight-car purchases. Railroads do not have money available for such purposes, he said, and are probably waiting for price reductions.

End Emergency Board Hearings On Second Diesel Engine Man

"It is obvious that the demands of the engineers' general chairmen are the product of the selfish personal ambitions of a few men who seek to destroy the contract obligations, distort and repudiate the agreements and understandings which they have made with the carriers, and resurrect and perpetuate jurisdictional rivalry and strife, in the hope that continued turmoil and dispute will serve their own personal ends," Howard Neitzart, counsel for the carriers, said in his closing argument before the Presidential emergency board which is investigating the demands of the Brotherhood of Locomotive Engineers for an additional engineman on Diesel road locomotives. Mr. Neitzart said he doubted whether a "more ridiculous demand has ever been presented in any public hearing involving a railway labor dispute," placing the responsibility on the union's officers

for "a plan for a super-featherbed."

The hearings were closed on March 23. The emergency board was created on January 28; opened hearings on February 8; and was subsequently granted a 45-day extension, so that its report to President Truman is due not later than April 13.

A Tale Told by Six Railroad Presidents

What lies ahead for the railroads in terms of finance, politics, service and operating efficiency was described by six railroad presidents for 1,200 leading business men of Chicago at a luncheon of the city's Association of Commerce and Industry on March 23. Limited strictly to five minutes apiece by a working model of a three-aspect color-light signal which flashed green for four minutes, yellow for one and red thereafter, each of the speakers on the panel contributed his views on the carriers future in relation to Chicago in vigorous rapid-fire style and with no withholding of punches.

President Budd of the Burlington: "The railroads require a great deal of money just to stay in business. As in 'Alice in Wonderland,' it takes all the running you can do to stay in the same place." The speaker suggested, as a partial offset for subsidies to competitors, tax allowances for the cost of improvements needed in the public interest, but not profitable in themselves, and for the difference between the cost of replacing a facility and its depreciated original price.

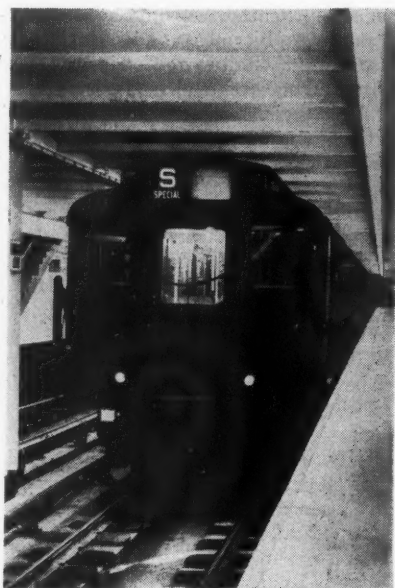
President Gurley of the Santa Fe (referring to prohibition of basing-point pricing): "By some quirk of the judicial and legislative mind, the manufacturer may not now absorb transportation costs to reach distant markets for himself, while the railroads are encouraged to sacrifice certain revenues in order to provide rates to encourage wide markets for producers."

President Johnson of the Illinois Central: "A lot of the railroads' competition depends upon government 'hand-outs'." Referring to the St. Lawrence Seaway project as exposing "the frailty of human nature," the speaker said that if the Chicago business man argues that the facility will lower his freight rates, and that the government owes this gift to the mid-West, he is violating his own principles and losing a battle in the war for his own survival.

President Williams of the North Western: "None of us understand just why the government behaves like it does." He reviewed in particular the anti-trust and reparations activities of the Department of Justice, and showed how, if successful, they would injure the roads.

President Buford of the Milwaukee: "A prime need of the railroads is a certain definite and powerful reserve strength."

President Farrington of the Rock



The Euclid Avenue, Brooklyn, N. Y., station of the New York Subway System, in which a new installation of General Electric slimline fluorescent lamps, in glass-enclosed fixtures, provides 10 footcandles of light on the platforms. The lamps are all T-8, six-foot lamps and every ninth lamp in the continuous fixtures operates on direct current to provide light in the event of an a.c. power failure. It is expected that the new lighting system will improve safety conditions and reduce the number of assaults and amount of pickpocketing

Island: "Efficiency in railroad operation and improvement in plant and equipment go hand in hand. Running a railroad is like being in a perpetual race; the hare represents costs, and the tortoise management, which is always hard put to it to keep up."

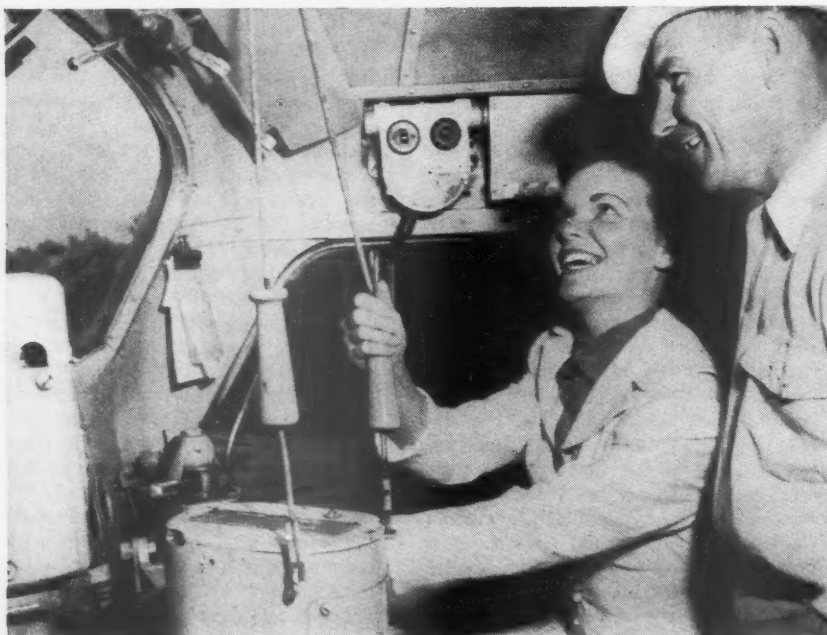
Chicago Terminal Authority Sought in Illinois Bill

A bill was introduced in the Illinois Senate this week which proposes crea-

tion of a Chicago terminal authority to acquire and assume operation of railroad terminals in that city and throughout Cook county. Chicago railroad officers, it is understood, were not consulted on the bill. The proposed authority—which would be patterned after the New York Port Authority—would be empowered to apply for and accept federal grants and loans and to enter into agreements with the federal government. It would not have power to levy taxes for any purpose.



"I WISH" TRAIN ON F. E. C.—The Florida East Coast played fairy godfather not long ago—to more than 50 starry-eyed Miamians of both sexes and all ages who had expressed to the "I Wish" editor of the Miami, Fla., Daily News a desire to ride in a locomotive cab. They rode in a special train—one Diesel-electric locomotive and one streamlined deluxe coach—over the 39-mi. Miami Belt in a leisurely 2 hr. 15 min. trip during which they visited the cab in groups of four, and even had the rare privilege—off the main line—of actually operating the locomotive. Miami News photos of the occasion show, above, a group of passengers getting pointers from Conductor E. E. Grow, and, below, Mrs. Bobbie Clark "taking over" from Engineman Joseph Hutlas. Other railroad men in charge of the trip included Munn Norwood, trainmaster, R. T. Jeffries, assistant general passenger agent, Luther Hall, special agent, C. S. Ketchie, flagman, and M. M. Eastburn, fireman.



Meanwhile, the Chicago Plan Commission, which has been working on a proposal for consolidation of the city's four South Side stations, announced that it would soon reveal a plan for unifying Chicago passenger facilities. In a report last August, the Chicago railroads recommended that existing stations be modernized rather than consolidated.

Confirms Squire Reappointment To Railroad Retirement Board

The Senate on March 16 confirmed President Truman's reappointment of Frank C. Squire as railroad management's representative on the Railroad Retirement Board for a new term ending August 29, 1953. Mr. Squire has been a member of the board since 1943 (see *Railway Age* of March 12, page 100).

Eight-Day Wabash Strike Ends

The walkout of 3,500 operating employees of the Wabash and its subsidiary, the Ann Arbor, ended on March 22—only one day after direct negotiations between the disputing parties had been resumed at the request of a Presidential emergency board which had gone to St. Louis, Mo., to conduct hearings in the case. Yard operations throughout the system got underway the same night, and trains began moving the following day. Service had returned to near-normal by March 24.

The unions—Brotherhood of Locomotive Engineers, Brotherhood of Locomotive Firemen and Enginemen, Order of Railway Conductors and Brotherhood of Railroad Trainmen—called their members back to work after some 40 per cent of the approximately 150 grievances had been settled by direct negotiation. Talks were continuing at St. Louis on the remainder of the disagreements with the three-man emergency board standing by to investigate and make recommendations on any issues upon which the disputants may not agree.

The walkout started at 6 a.m. on March 15, but the Presidential order setting up the emergency board was not signed until later that day. Normally, such an order delays a strike for 60 days. However, the brotherhoods maintained that, since the board was created after the strike started, they were not obligated by the provisions of the Railway Labor Act to halt the walkout. Commenting on this point, R. I. McDonough, chief justice of the Utah Supreme Court, and chairman of the fact-finding board, said that the hearings should not proceed while employees are on strike and that such action might lead to a "bad precedent." He then prevailed upon the unions to recall their members to work pending further negotiations.

Joseph A. McClain, Jr., general counsel of the Wabash, told the board that the railroad repeatedly telephoned and

telegraphed the National Mediation Board, requesting that a fact-finding board be appointed. The Mediation Board had intervened in the case on January 20, forestalling strike action which had been postponed twice previously. The March 15 strike date was set when mediation failed to bring the parties into accord.

In addition to Justice McDonough, the emergency board at St. Louis is composed of Curtis G. Shake, former member of the Indiana Supreme Court, and John W. Yeager, associate justice of the Nebraska Supreme Court.

Simplicity Needed to Lighten I. C. C. Burdens—Aitchison

Because it is burdened with many formal proceedings recognized as the aftermath of war—although its staff numbers some 500 fewer employees than in 1941—the Interstate Commerce Commission is faced with a situation which calls for “united efforts to facilitate and simplify the presentations which we must receive,” Clyde B. Aitchison, former chairman of the commission, declared at Chicago on March 18. He told members of the Chicago Chapter, Association of Interstate Commerce Commission Practitioners, that great nationwide issues never can be settled fairly in their details without a certain degree of expense, intricacy and consumption of time, but that efficiency need not be lost in simplifying these details.

“It is often said, why not employ good assistants, and delegate to them as much of this work as can be done,” said the speaker. “The Hoover Commission recognizes the principle. But the commission [I.C.C.] has delegated about as much of its functions as can be done within the law, and it is not minded to be a rubber stamp for the work of unknown assistants operating *de facto*, but without direct legal responsibility. And as to hiring the assistants, that is presently out of the question. Why talk of expanding the mediatory functions of the Bureau of Informal Cases, when the bureau has but one stenographer?”

The commissioner pointed out that the I.C.C.’s staff has decreased greatly in number and expressed the opinion that it must be cut further. A “startling” number of key men have been lost by death, while others have retired or taken more lucrative jobs, he stated. “This is due partly to time, but it reflects the strain of war and succeeding years. More commissioners have died in office in the last six years than in any previous period three times as long.” The commission, said the speaker, has been forced to a policy of filling no vacancies and of making no promotions not required by law (except in indispensable key positions and stenographic force) and faces the “ugly prospect that to clear the law it is possible that

nearly 50 more separations from service must be made by June 30 next.”

Commissioner Aitchison said that a “wholly unexpected action shocked the whole institution” recently, when the examining committee of the Civil Service Commission disapproved 12 out of 48 employees from the ranks of the corps of examiners designated as hearing examiners under the new Administrative Procedure Act. The men were disapproved, he said, for “over-all characteristics,” “insufficient length of qualifying experience” or “insufficient specialized experience,” although they had been serving as hearing examiners under temporary appointments for about two years and each had several, or many, years of antecedent experience.

In another part of his address, the commissioner said: “To keep the record clear, I want to emphasize that there is no semblance of complaint on my part against the policies of Congress or its agents in now portraying a few facts that are public property, and I am not lobbying for support. The commission always cooperated with Congress and the executive in carrying out the fiscal, as well as the substantive, policy of the Congress, and it will always do so.”

Five Reparation Cases Assigned for Hearing

Five of the so-called government reparations cases have again been assigned by the Interstate Commerce Commission for hearings which will open on June 21 before the commission’s Division 4 at Washington, D. C. The five cases, like several other pending proceedings, arose out of complaints whereby the government is seeking to recover alleged overcharges which it claims the railroads made on its shipments of various commodities during World War II.

They were previously assigned for hearing on September 22, 1948, but that hearing was postponed by the commission, at the request of the Department of Justice, after the Department of the Army had raised “security” questions with respect to some of the evidence which might be adduced (see *Railway Age* of September 11, 1948, page 76). The Secretary of the Army suggested that his department should have more time to review the material which the Justice Department was planning to present at the hearings.

The proceedings are No. 29735, wherein the complaint assails charges paid by the government on export freight stopped at storage-in-transit depots; No. 29795, wherein the complaint, assails charges paid by the government as a result of the application of railroad “policing” rules to its transcontinental shipments moving to Pacific Coast ports for export; and Nos. 29622, 29746 and 29805 which, in turn, assail rates paid by the government on its wartime shipments, of soldiers’ pack-carrier cases, aluminum airplane

B. & M. CONTINUES TELEVISION

A new series of television broadcasts that will take the audience behind the scenes in modern railroading has been announced by the Boston & Maine. The opening telecast, on March 10, took the viewing audience on a fast ride in the cab of a Diesel-electric locomotive hauling the “Kennebec,” non-stop train from Boston, Mass., to Portland, Me.

Each week a different angle of railroading will be featured with a railroad officer acting as guest speaker on the program originating in his department. During the series the viewing audience will be taken into modern signal towers, where they will see the operation of signal systems of the latest types. They will ride on modern radio-equipped freight trains and meet the men who run them. Operation of the latest type deluxe dining cars will also be featured, with explanatory talks and motion pictures of the kitchens. Repair shops, showing steam and Diesel locomotives being overhauled, will be another telecast.

The B. & M. claims to have sponsored the first railroad television show ever produced, “The Boston & Maine Winter Sports Special,” which ended March 3. This second 10-week series, to be known as the Boston & Maine Railroad Show, will be televised every Thursday at 7:30 p.m. from station WBZ-TV in Boston.

landing mats, and steel airplane landing mats. The “security” questions were raised with respect to Nos. 29735 and 29795.

The commission’s notice announcing the new hearing date of June 21 also directed the government to submit, in writing, by May 2 the testimony and copies of the exhibits which it plans to offer in Nos. 29735, 29746, 29795, and 29805. Copies of these presentations must also be supplied to counsel for the defendant railroads by the same date.

Western Pacific Christens “California Zephyr”

A bottle of California champagne wielded by movie star Eleanor Parker christened the new “California Zephyr” of the Western Pacific, Denver & Rio Grande Western and Burlington Lines at the ferry building on San Francisco’s waterfront at 2 p.m. on March 19, one day before the train went into service between San Francisco and Chicago.

The set of equipment thus “christened” was one of six complete trains providing the new service, which are described in detail in feature articles in this issue. It used the tracks of the State Belt railroad to reach the dedicatory scene. The observation lounge car was spotted directly in front of the famous ferry tower, while the ceremonies were held at the head end.

Among the ceremonies were a luncheon for business and civic leaders,

an address of welcome by Mayor Leland Cutler, presentation of the train by W. P. President Harry A. Mitchell and its "Acceptance on Behalf of the People of California" by Lieutenant-Governor Goodwin J. Knight.

Every woman passenger on the "Zephyr's" first eastbound run on March 20 received a corsage of three Hawaiian orchids in "California Zephyr" colors of orange and silver. The train was given a send-off by the W. P. employees' band; passengers included the first 1949 "trade trip" party of the San Francisco Chamber of Commerce en route to Salt Lake City, Utah, and Denver, Colo.

Pre-inaugural trips included several exhibition runs from San Francisco to Niles, Cal., on March 16, 17 and 18.

It's Rosebushes versus Barbed-Wire with C. & E. I. as Referee

The Chicago & Eastern Illinois will plant multiflora rosebush hedges along some of its right-of-way in an experiment aimed at replacing trackside barbed-wire fences. H. R. Sampson, vice-president, traffic, says the hedge will provide both railroad and farmers with a stocktight barrier in three to six years with a 40 per cent saving over woven wire.

Two half-mile sections of the hedge are to be planted in separate sections of Illinois to test the shrub's growing ability in different areas. Developed by the United States Conservation Service, multiflora rose hedges grow to a height of eight feet and are said to be replacing fences for certain uses. Farmers in the middle west have planted more than two million such shrubs during the last five years, and trial plants are now growing in the south.

Hoover Group Would Leave Retirement Board Undisturbed

"Retention of the Railroad Retirement Board in its present status" has been recommended by the Commission on Organization of the Executive Branch of the Government (the so-called Hoover Commission) in a report which at the same time proposed that various federal-government activities with respect to other social-security services, education, and Indian affairs, be consolidated in a new department of cabinet rank. The report was submitted to Congress on March 21.

The commission's recommendation that the Retirement Board set-up be left undisturbed was preceded in the report by a brief discussion which said that the board's activities were "much broader in scope than the welfare functions to be included in the new department"; and that "essentially the system works well as located." The report added that "administratively there is no economy or efficiency to be achieved

by destroying the present well-integrated system and transferring it in whole or in part to one or more agencies," and that the system "is a uniquely administered and completely privately supported system operated under government auspices."

As to the railroad unemployment insurance system, the commission conceded that it would be possible to change it from a completely federal system to one wherein the railroads made their unemployment tax payments to the states. The report added, however, that "nothing would be gained in efficiency by segregating the employment functions which are mingled with the retirement functions throughout the board's organization."

Express Agency Sues Clerks' Union for \$5,000,000

Charging that its business in the New York metropolitan area has been "completely interrupted and stopped . . . through the device known as the slow-down," and that such action on the part of the union was a breach of contract, the Railway Express Agency has filed a damage suit for \$5 million against the Brotherhood of Railway Clerks. Daniel J. Sullivan, general chairman of the Brotherhood's New York express division, and seven local lodge chairmen were also named as defendants in the suit, which was filed in the United States district court at New York.

Meantime, the National Mediation Board arranged for R. E. A. and union representatives to meet at Washington, D. C., on March 23, in the hope that settlement of the express dispute would be facilitated by settlement on March 19 (as reported elsewhere in this issue) of the wage and hour dispute between the railroads and their non-operating employees. It is understood, however, that no agreement was reached at this meeting.

The issues involved in the express case are similar to those in the non-operating railroad workers' case. The employees are seeking a reduction of weekly working time from 44 to 40 hr. without loss of pay; two consecutive days off; a 25-cents-per-hr. wage increase, pay for time lost because of the present "slow-down," and various other benefits. The R. E. A. has offered a staggered 40-hr. week without pay loss, effective September 1; and a seven-cents-per-hr. increase, in line with the railroads' settlement with their non-operating workers.

As reported in the *Railway Age* of March 19, page 98, "the slow-down," by 5,700 loaders and package sorters, resulted in displacing also 3,300 drivers and in declaration of an embargo on all express into, out of or through New York, except carload lots. By picketing express terminals at Bayonne, N. J., Elizabeth, Newark and Newark airport the union had in effect extended

its "slow-down" to those points, but threats to picket New York passenger terminals or express stations in more distant cities had not materialized as this issue of *Railway Age* went to press.

The R. E. A. claims already to have suffered damages far in excess of the amount of its suits.

RRs Taxed and Regulated to Danger Point, Says E. G. Budd

American railroads have been taxed and regulated to the danger point, Edward G. Budd, Jr., president of the Budd Company, said last week in San Francisco, Cal., at a luncheon of that city's Chamber of Commerce. "Ours is the last great railroad network in the world operating under the system of free enterprise," Mr. Budd added. "Socialization and government ownership generally come as a result of threatened bankruptcy. When an industry has been over-taxed and over-regulated until it cannot earn its keep and therefore cannot attract new capital fast enough to take advantage of new technology, and thus maintain its competitive position in service to the people, then the government must perforce socialize it."

With operation by a non-competitive government bureau, Mr. Budd continued, "the result generally is deterioration in service and the industry becomes a charge on the taxpayer instead of a source of revenue. We must, by all means, halt any threat to our system of private ownership and operation of our railroads. As a safeguard against such dangers, the railroads must be solvent—and they must have the strong popular support of the American public. I am convinced that new trains like the 'California Zephyrs' can help immeasurably in achieving these two objectives. In the first place, passenger traffic can be made profitable. This depends, of course, on the quality and cost of the service offered to the public. We have followed, with a great deal of interest and gratification, the earning records of the trains we have built. In every case our streamliners have made money for the railroads.

"The popular appeal of this sort of equipment can go a long way in achieving for the railroads their rightful place in the minds—and in the hearts—of the American public. The romance of the railroads is still as strong as ever."

Committee Hears Cross on His Appointment to the I.C.C.

Hugh W. Cross, who has been nominated by President Truman for membership on the Interstate Commerce Commission as successor to the late George M. Barnard, appeared before the Senate committee on interstate and foreign commerce at a March 22 public hearing on the nomination. The appointee was questioned by several members of the committee, but no

one else made a presentation at the hearing. Committee Chairman Johnson, Democrat of Colorado, stated that the committee would take up the matter of reporting the nomination to the Senate at a meeting on April 6.

The nomination, sent to the Senate recently by President Truman, is for the remainder of a term ending December 31, 1950. Mr. Cross is a Republican and a former lieutenant governor of Illinois (see *Railway Age* of March 12, page 99). Among the committee members questioning Mr. Cross at the hearing was Senator Reed, Republican of Kansas, who indicated that he would not oppose a favorable committee report but nevertheless expressed his "disappointment" at the nomination.

Senator Reed along with Senator McMahon, Democrat of Connecticut, had brought out by their questions the fact that the nominee had virtually no experience in the transportation field. In the course of such questioning, Senator Reed had stated it to be his opinion that an I.C.C. appointment was one of the most important in the regulatory agencies of the government. Thus, he said, he was sorry that the President had not selected a more experienced man for the position.

Meanwhile, Chairman Johnson had asked Mr. Cross if he favored government ownership of railroads; and the nominee replied that he did not. Senator McMahon and other New England senators, including Senators Brewster of Maine and Tobey of New Hampshire, Republicans, expressed disappointment because the appointment had not gone to a New Englander.

As to the decision to delay a committee vote on the nomination until April 6, Chairman Johnson explained that Mr. Cross's appointment was only one of several before the committee. It was the committee's desire to dispose of these pending nominations at one meeting, the chairman added.

Pullman Conductors Set March 31 Strike Date

A nation-wide walkout of Pullman car conductors has been set for 6 a.m. March 31, as a result of a strike vote taken among slightly more than 2,000 active Pullman conductors represented by the Order of Railway Conductors. The strike threat grows out of a dispute over the handling of a number of minor grievances concerning special operating conditions in Pullman service. The conductors' organization feels that National Railroad Adjustment Board awards in earlier cases should govern in the settlement of the current grievances. The Pullman Company denies that the previous cases set precedent for the present disputes, and contends that they should be processed through the N.R.A.B. as prescribed in the Railway Labor Act.

A. G. Wise, executive vice-president of the O.R.C., announced the strike on

A REMEDY FOR UNSOUND PUBLIC THINKING

The managements and boards of directors of every railroad in this country are doing the railroad industry and America's future positive harm by failing to issue stock for earnings invested in the property so that the stock at par actually will reflect the whole investment in the property, not just one-third or one-tenth of the investment.

Net value after depreciation of the property investment in all railroads is about \$23 billion. To this should be added \$2 billion in cash and nearly \$1 billion in materials and supplies, making a total net investment of \$26 billion—on which the 1948 earnings amounted to only 4.3 per cent, or about \$1,200,000,000. After all interest charges, there was left for stockholders \$711,000,000.

In other words, there is nothing the matter with the railroads. They have the finest plant and equipment and the largest cash and working capital position in their entire history. The trouble lies in the thinking of the public about the railroads—due obviously to lack of knowledge.

Adequate knowledge of the facts would lead every right-thinking citizen to favor a square deal for the railroads. So long as the railroads are denied a decent return on their invested capital, and so long as they are compelled to subsidize all their competitors, they are not getting a square deal. Notwithstanding the present magnificent plant and equipment, hundreds of millions of dollars could be spent right now for additions and betterments to the railroad plant which would result in improved service, increased efficiency and still lower costs to the public.

During the past few years one mid-western road spent \$80 million in track realignment which reduced this road's

transportation costs by nearly 10 per cent. On the basis of present gross revenues of \$200 million, this means a saving of nearly \$20 million per annum or 25 per cent on the investment. Another railroad has installed an automatic classification yard at a cost of \$10 million with commensurate savings.

The expenditure of the vast sums involved in such a program is only possible if the funds can be obtained from the public. Accordingly, the price level of railroad securities and the cost of raising and servicing the funds is a matter of vital concern to America's future. This invites examination of the present situation in the railroad securities market.

What do we find? Stocks of leading roads selling for less than twice one year's earnings; bonds at prices to return over 10 per cent per annum despite large coverage for interest requirements. Whole railroads priced in the market—some for less than their salvage value, others for less than cash and rolling stock alone—the railroad plant itself being given away.

Assets and earnings are such that on a comparable basis many of these securities are worth enough to make financing possible right now if the facts were known....

To know the facts is of vital importance to America's future. We need a public aroused to give the railroads a square deal and to keep them as private enterprises.

—From a discussion of the railroads' future by Ambrose W. Benkert, of A. W. Benkert & Co., New York, broadcast March 6 over the ABC network. Reprints of his remarks are available from the Committee for Constitutional Government, 205 East 42nd street, New York 17.

March 17. Neither the Pullman Company nor the O.R.C. has sought the services of the National Mediation Board, and although the board has requested statements of fact from both parties, up to the time *Railway Age* went to press, intervention of the board on its own motion had not been announced.

February Revenues 6.8 Per Cent Below Those of February, 1948

From preliminary reports of 82 Class I railroads representing 81.7 per cent of total operating revenues, the Association of American Railroads has estimated that February gross amounted to \$545,506,785, a decrease of 6.8 per cent below the \$585,141,544 reported for the same 1948 month. Estimated February freight revenues were \$450,227,642, as compared with February, 1948's \$481,927,472, a decrease of 6.6 per cent. Estimated passenger revenues totaled \$53,869,662, compared with \$58,640,310, a decrease of 8.1 per cent. The es-

timate for all other revenues was \$41,410,081, compared with \$44,573,762, a decrease of 7.1 per cent.

Conclude Chicago Hearings on 13 Per Cent Freight-Rate Boost

Following five days of sessions at Chicago—during which oral testimony of nearly 100 witnesses was heard and some 50 verified statements were filed—Division 2 of the Interstate Commerce Commission concluded its hearings in that city on the railroads' Ex Parte 168 request for a permanent freight-rate increase of 13 per cent to supplant an interim advance of 5.2 per cent. On March 21, regional hearings moved to Montgomery, Ala.

Among the interests which sent representatives to Chicago to protest the proposed increase were the dairy industry and livestock groups. L. F. Orr, general traffic manager of the Pet Milk Company, representing the Dairy Industry Committee, said the committee "is not here questioning the need of at

least some of the railroads for additional revenue, but it believes that they are trying to charge too much on certain traffic and not enough on certain other traffic, and that rates on certain traffic have long since passed the point where they are competitive with trucks."

A representative of several livestock associations said: "Present rates and unit revenue per ton on livestock are at the pinnacle of all time. The number of livestock on farms and number marketed have increased, while tonnage of livestock originated by the railroads has substantially decreased. The railroads have not received, and are not receiving, increased revenue from livestock traffic, but, on the contrary, have failed by more than \$13,000,000 to secure as much revenue from livestock traffic under the higher rates during the first 18 months for which data is available, as they formerly received under lower rates."

Would Transfer Army's Rivers Work to Interior Department

Transfer to the Department of the Interior of the rivers and harbors and flood control activities of the Army's Corps of Engineers has been recommended by the Commission on Organization of the Executive Branch of the Government — the so-called Hoover Commission. The commission made its recommendation in a report on the Interior Department submitted to Congress on March 17.

The recommendation flowed from the commission's basic finding that the department should be given "more clearly the mission of development of subsoil and water resources." Another recommendation of the report called for creation in the office of the President of a "Board of Impartial Analysis for Engineering and Architectural Projects." The proposed board would "review and report to the President and the Congress on the public and economic value" of projects proposed by the Interior Department, and "periodically review authorized projects and advise as to progress or discontinuance."

As to that recommendation, the commission's chairman, former President Herbert Hoover, expressed his "further views" to the effect that there should be two boards—one for engineering projects, the other for architectural projects; and that they should be located in the Interior Department and not in the President's office. Secretary of Defense Forrestal, a member of the commission, also had "further views" on the matter. He favored review procedures, but indicated that he would provide them by strengthening the review unit which already exists in the Bureau of the Budget.

The recommendation calling for transfer of the rivers and harbors and flood control work to interior drew dissents from two members of the com-

mission—Senator John L. McClellan, Democrat of Arkansas, and Carter Manasco of Alabama, former member of the House of Representatives. Commissioner Forrestal refrained from participating in discussion and formulation of this recommendation—"because of his relationship, as Secretary of Defense, to the Corps of Engineers in the National Military Establishment."

January Truck Traffic

Motor carriers reporting to American Trucking Associations transported in January a total of 2,726,974 tons of freight, a decrease of 5.4 per cent below the previous month's total of 2,883,836 tons, but 2.9 per cent above the 2,650,796 tons hauled in January, 1948. The figures, according to A. T. A., are based on comparable reports from 303 carriers in 42 states.

Maine Roads Cut Potato Rates To Meet Truck Competition

The Bangor & Aroostook, the Maine Central, the Canadian Pacific and the Aroostook Valley have published tariffs to become effective April 23 reducing carload rates on potatoes from Maine to other New England points by from 10 to 16 per cent, to meet truck competition.

Application has also been made to the various regulatory commissions concerned for permission to make the new rates effective at an earlier date than provided by the published tariffs.

T. A. A. Officers Call for Modern Transport Policy, Spending Control

"There is no real modern national policy dealing with transportation as a whole," Leif Gilstad, vice-president of the Transportation Association of America, declared in a speech at Fremont, Neb., on March 25.

"Ours is the finest system in the world," Mr. Gilstad told the Fremont Rotary and Kiwanis clubs. "But obsolete national policies and political regulation have forced costs up and resulted in vast duplications of investments and services. Each form of carrier has grown up over the years with no relation to a sound pattern of coordination. The result is a recurring state of emergency solved only by higher rates or new subsidies. It is time we developed a set of policies so that all transportation can be operated so as to be fair to management, workers, investors and users alike."

"Straighten out the muddle," Mr. Gilstad concluded, "and we will have good competitive transportation service, with a minimum of waste, with fair rates. But let's keep it out of the hands of government, except for such regulation as is necessary to assure a workable system."

On March 21, Donald D. Conn, executive vice-president of the T. A. A.,

speaking at the annual meeting of the Traffic Club of Richmond, Va., proposed a "yardstick" which he said Congress should use for every appropriation of federal money except for direct conduct of government or national defense. "Because government has been moving steadily into many fields in an American version of 'soft Socialism' it is time," he said, "to reappraise policies before the business structure is entirely dominated by government expenditures and activities."

The "yardstick," Mr. Conn suggested, should provide that federal appropriations would (1) not create discrimination or privilege; (2) not put government into business which private enterprise can handle; (3) supplement, but not compete with, private initiative, and (4) make government an aid to, but not a ruler of, the people.

"The Transportation Association," he concluded, "wants to prevent government ownership in transportation and in every other field; but it is convinced that the way to prevent it is by positive constructive action."

Pacific Coast Board Holds Silver Anniversary Meeting

More than 400 members and guests attended the 78th regular meeting—which also marked the Silver Anniversary of the board's establishment—of the Pacific Coast Transportation Advisory Board at Oakland, Cal., on March 16 and 17.

The principal speakers were Weldon B. Gibson, chairman, business and industrial economics, Stanford Research Institute, Stanford University, who addressed a luncheon session on "Possibilities for Research in Railroad Transportation"; Colonel J. Monroe Johnson, director, Office of Defense Transportation, and member, Interstate Commerce Commission; and Arthur H. Gass, chairman, Car Service Division, Association of American Railroads. General chairman T. F. McCue, traffic manager, Crane Company, Los Angeles, Cal., presided.

Officers elected included Irving F. Lyons, traffic director, California Packing Corporation, San Francisco, Cal., general chairman; J. W. Witherpoon, assistant general traffic manager, United States Rubber Company, Los Angeles, vice-general chairman; and George D. Cron, traffic manager, Chevrolet-Oakland Division, General Motors Corporation, Oakland, general secretary.

Freight Car Loadings

Loadings of revenue freight in the week ended March 19 totaled 607,767 cars, the Association of American Railroads announced on March 24. This was a decrease of 101,559 cars, or 14.3 per cent, under the previous week, caused principally by the coal-mining "holiday" (the decline in loadings of



The Gulf, Mobile & Ohio has completely remodeled its passenger station at Springfield, Ill., providing a spacious waiting room, built-in luggage lockers, an efficient restaurant and an attractive exterior

coal accounted for 93,231 cars of the 101,559-car drop). It was a decrease of 91,825 cars, or 13.1 per cent, under the corresponding week last year, and a drop of 236,274 cars, or 28 per cent, under the equivalent 1947 week.

Loadings of revenue freight for the week ended March 12 totaled 709,326 cars, and the summary for that week as compiled by the Car Service Division, A.A.R., follows:

Revenue Freight Car Loadings For the week ended Saturday, March 12			
District	1949	1948	1947
Eastern	131,551	154,801	161,933
Allegheny	152,333	172,658	179,641
Pocahontas	56,244	72,446	71,047
Southern	124,016	138,175	142,533
Northwestern	77,698	80,116	91,918
Central			
Western	110,496	116,483	128,280
Southwestern	56,988	61,807	65,795
Total Western Districts	245,182	258,406	285,993
Total All Roads	709,326	796,486	841,147
Commodities:			
Grain and grain products	48,727	34,947	51,568
Livestock	9,038	8,424	12,484
Coal	139,081	194,679	191,836
Coke	15,453	14,567	14,442
Forest products	37,863	44,348	48,715
Ore	14,455	13,461	14,825
Merchandise			
l.c.l.	96,749	115,794	125,059
Miscellaneous	347,960	370,266	382,218
March 12	709,326	796,486	841,147
March 5	705,552	791,984	805,775
February 26	688,128	790,910	849,991
February 19	697,335	804,937	776,589
February 12	699,442	733,870	799,977
Cumulative total			
10 weeks	7,025,545	7,801,725	8,156,872

U. P. OFFERS "GIFT" TICKETS

A prepaid ticket order, appropriately enclosed in a special envelope, is the Union Pacific's suggestion to those persons pondering what to give for weddings, anniversaries, birthdays and graduations. The new service, just instituted, provides that the receiver merely turn in the ticket order for a rail ticket.

In Canada.—Carloadings for the week ended March 12 totaled 74,194 cars, compared with 72,671 cars for the previous week, and 74,642 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
March 12, 1949	74,194	33,626
March 13, 1948	74,642	37,529
Cumulative totals for Canada:		
March 12, 1949	723,948	319,255
March 13, 1948	730,424	358,742

A.R.E.A. Adds G. W. Miller, C.P.R., to Board of Direction

Supplementing the election of officers of the American Railway Engineering Association at its annual meeting, March 15-17, as reported in *Railway Age* of March 19, the board of direction of the association, meeting after the close of the convention, elected as a director G. W. Miller, assistant engineer maintenance of way, Eastern region, Canadian Pacific, Toronto, Ont. Mr. Miller's election was to fill the vacancy created by the advancement of H. S. Loeffler, assistant chief engineer, Great Northern, St. Paul, Minn., to vice-president of the association.

March 14-16, 1950, was set as the time of the association's next annual meeting, which, as usual, will be held in Chicago.

OVERSEAS

British Railways Electrifying 75 Miles of Line

Electrification of sections of the former London & North Eastern Railway in England, announced in 1936 and suspended during the war, is again

under way on the following lines, covering 75 mi. of route and 330 mi. of track:

- (1) Manchester (London Road) to Sheffield and Woodhouse, including twin, 3-mi. tunnels;
- (2) Penistone (Barnsley Junction) to Wath, via Worsborough;
- (3) Glossop branch;
- (4) Stalybridge branch to Dukinfield;
- (5) Oldham, Ashton & Guide Bridge branch to and including Ashton Moss sidings;
- (6) Fairfield to Manchester (Central) and Trafford Park siding, and
- (7) Ashburys to Ardwick yard and Midland Junction.

The overhead system, using direct current at 1,500 volts, will be employed. When the job is finished practically all passenger and freight trains will be electrically operated and steam locomotives will generally be confined to switching service. Local passenger services between Manchester and Hadfield and Glossop will be provided by eight 3-coach multiple-unit trains with first and third-class accommodation; train mileage will be increased some 48,000 per year. Other train services will be performed by 85 electric locomotives capable of a speed of 65 m.p.h., the maximum permissible over the lines being electrified.

The existing method of signaling will continue, except that electric color light signals will replace all "distant" semaphore signals. Distant signals are also to be repositioned to insure a breaking length of 1,200 yd. between them and the appropriate home signals on falling gradients. Associated with the electrification scheme are the boring of a new double-line tunnel at Woodhead and a new single-line tunnel at Thurgoland.

About 30 per cent of the foundations for overhead line equipment have been completed and 15 per cent of the structures erected. In areas subject to colliery subsidences special overhead structures capable of adjustment are to be erected.

The multiple-unit trains are to be built by Metropolitan-Cammell Carriage & Wagon Co. and the Birmingham Carriage & Wagon Co., and the electrical equipment for them by the General Electric Company. Electrical equipment for the locomotives is being provided by Metro-Vickers and the mechanical parts by British Railways.

Other projects now in progress include electrification of the Liverpool Street-Shenfield main line; installation of color-light signaling on the Coulsdon-London Bridge and Victoria section of the Southern region, and modernization of Toton yard between Nottingham and Derby.

British Railways Adopt Standard Colors for Rolling Stock

Following a series of experiments last year, on which the public was invited to give its opinion, the British Railways have arranged gradually, as circumstances permit, to adopt standard colors for locomotives and coaches, as follows: Heavy duty express passenger

locomotives — blue, with black and white lining; selected passenger locomotives — dark green, with black and orange lining; other passenger and mixed traffic locomotives — black with red, cream and gray lining; freight locomotives — black unlined; main line corridor coaches — crimson lake with cream panels; coaches for local steam services, and passenger-train cars other than coaches—crimson lake, and multiple-unit electric coaches — green.

EQUIPMENT AND SUPPLIES

Siamese Group Here to Purchase RR Equipment

A delegation of Siamese government railroad and communications officials is in this country to investigate possibilities of purchasing locomotives, cars and other equipment required for rehabilitation of Siamese railroads, according to a recent issue of Foreign Commerce Weekly. The delegation, which expects to remain in the United States until approximately April 8, plans to visit a number of locomotive- and car-manufacturing plants. The mission can be reached through the office of the commercial attache at the Siamese embassy in Washington, D. C.

Equipment on Order

Class I railroads and railroad-owned and controlled refrigerator car lines had 78,061 new freight cars on order March 1, compared with 108,399 on order March 1, 1948, according to the Association of American Railroads. This year's March 1 total of cars on order by all railroads and private car lines was 85,974.

The 78,061 cars involved in the March 1 orders of railroads and their affiliated refrigerator car lines included 31,408 cars to be built in railroad shops and 46,653 to be built by contract builders. The breakdown by types of cars was as follows: Box, 13,283, including 12,883 plain and ventilated and 400 auto-box; hoppers, 36,071, including 3,501 covered hoppers; gondolas, 17,461; flat, 4,328; refrigerator, 5,177; stock, 725; miscellaneous, 1,016.

Class I roads on March 1 also had on order 1,495 locomotives, including 1,452 Diesel-electrics and 43 steam locomotives. On March 1, 1948, there were on order 1,596 locomotives, including 1,486 Diesel-electrics, 108 steam, and 2 electrics.

During the first two months of this year, Class I roads and affiliated refrigerator car lines placed 16,937 new freight cars in service, as compared with 15,518 in the same period of 1948. The former total included 3,540 box

cars, 8,598 hoppers, 3,712 gondolas, 639 refrigerator cars, 188 flat cars, and 260 miscellaneous cars. Retirements in the two months totaled 11,114 cars of which 5,344 were retired in February. In the first two months of last year, 8,520 freight cars were retired.

New locomotives installed by Class I roads in this year's first two months totaled 274, including 260 Diesel-electrics and 14 steam. In the first two months of last year, 181 locomotives were installed, including 177 Diesel-electrics, 2 steam and 2 electrics.

LOCOMOTIVES

The Pennsylvania has placed orders for four experimental electric freight locomotives. The Westinghouse Electric Corporation will build two 5,626-hp. locomotives, each with two units. Each unit of one locomotive will have three 4-wheel trucks and each unit of the other locomotive will have two 6-wheel trucks. The General Electric Company will build two 2-unit 5,000-hp. locomotives, with each unit having two 4-wheel trucks. The locomotives, when completed, "will be subjected to exhaustive road and other tests to determine the locomotive best adapted to the railroad's needs and showing the greatest advance in actual performance," the P.R.R. said.

SIGNALING

The Reading has ordered equipment from the General Railway Signal company for installation of a Type K 2-wire code controlled interlocking at Cheltenham, Pa. The control machine, to be located at Frankford Junction, will have 11 track indication lights and 12 levers for control of 6 switch machines, 2 switch locks, and 13 signals at Cheltenham, 2 mi. distant. In addition to the control machine and coding equipment, the order includes Type B relays, Type K relays, welded steel housings, and Model 7 switch circuit controllers.

ORGANIZATIONS

William E. Hayghe, chief of the Central Traffic Service Division, Bureau of Federal Supply, U. S. Treasury, was elected president of the Traffic Club of Washington, D. C., at the club's March 16 meeting in that city. He succeeds C. Guy White, district freight agent of the Chesapeake & Ohio. During Mr. White's administration, Mr. Hayghe had been first vice-president. He has been succeeded in the latter position by Francis G. McCann, general agent of the New York Central, who was formerly second vice-president. The new second vice-president is John S.

Peters, assistant chief of the Transportation and Service Division, Reconstruction Finance Corporation, while Charles E. Milford, administrative officer, Finance Office, Department of the Army, continues as secretary-treasurer.

The American Geographical Society will hold its next meeting, Lecture series B, on March 29, 8:30 p.m., in the Engineering Societies' building, 29 West 39th street, New York. Dr. Edward Ullman, assistant professor of regional planning at Harvard University, will deliver an illustrated lecture on "The Railroad Pattern of the United States."

The Northwest Car Men's Association will hold its next meeting on April 4, at 8 p.m., at the Midway Club, 1931 University avenue, St. Paul, Minn. A question and answer program for the benefit of inspectors and carmen is scheduled.

The Western Railway Club will hold its next meeting on April 18, at 6 p.m., in the Hotel Sherman, Chicago. Dr. J. Roscoe Miller, dean of the Northwestern University and medical director of the Chicago & North Western, will be the guest speaker.

SUPPLY TRADE

American Brake Shoe Sales Were \$120,190,784

Consolidated net sales of the American Brake Shoe Company were \$120,190,784 in 1948, compared with \$107,632,965 in 1947. Net profit was \$5,184,317, compared with \$4,543,001. Unfilled orders at the end of January, 1949, were about \$29,000,000. "Carloadings now are lower and many railroads are laying off men in their maintenance departments," William B. Given, Jr. president, said in the annual report. "The effect is beginning to be felt in the volume of our incoming orders. . . We do not know what the future holds as to volume, price competition or governmental actions concerning business. Business is in a recession which we believe will proceed for a substantial period [although] there are no present indications of an impending depression similar in degree to that of the early thirties."

General Railway Signal 1948 Net Was \$1,401,772

Consolidated net profit of the General Railway Signal Company and its subsidiaries in 1948 was \$1,401,472 or \$3.88 a share, compared with \$583,183, or \$1.40 a share, in the preceding year. "The improvement is attributable to greater volume and a better price struc-

ture," Paul Renshaw, president, said in the annual report. "Incoming orders and shipments are approximately in balance," he added. "The prospects for the coming year are somewhat clouded by the outlook for the railroads. Carloadings are showing a decline. Historically, this trend, if continued, will result in a decrease in railroad purchases."

Standard Railway Equipment Reports Higher Sales in 1948

Net sales of the Standard Railway Equipment Manufacturing Company and its subsidiaries last year were \$24,359,575, compared with \$23,436,008 in 1947. Net profit totaled \$3,640,936, compared with \$4,013,254. R. A. Williams, president, said in the annual report that "unfilled firm orders on hand on December 31, 1948, amounted to \$12,900,000 as compared with \$16,800,000 carried over from 1947. . . . Projecting business prospects beyond the current year is hazardous, but normal freight car retirements alone augur well for future earnings. . . . It is expected that new car building, and repairs, for the Canadian railways will insure a continuing demand for the products of the company's Canadian subsidiary."

National Malleable's 1948 Net Up Sharply Over 1947

Net profit of the National Malleable & Steel Castings Co. last year totaled \$3,041,181, or \$6.40 a share, compared with \$527,372, or \$1.11 a share, in 1947. Sales in 1948 amounted to \$50,902,756, an increase of more than \$11,000,000. "The increase in tonnage of sales over 1947 was almost entirely in steel castings for the railroad industry," Cleve H. Pomeroy, president, said. "The order book of the company at December 31 was substantial, but it was lower than it was a year before, and competition in our industries was becoming more keen. This is not a cause for pessimism, but it is an incentive for added effort."

Alco Backlog \$105,000,000

American Locomotive Company's current backlog of unfilled orders is \$105,000,000, compared with \$115,000,000 a year ago, according to the recently released annual report. Net sales of the company and its wholly owned subsidiaries during 1948 totaled \$143,919,457, compared with \$110,528,621 in the preceding year. Net income was \$5,490,659, compared with \$4,420,923. A statement issued by the company said the stockholders, at their annual meeting in New York on April 19, will be asked to vote on a proposal to reduce the amount of authorized capital stock from \$42,006,055 to \$21,783,832 and to eliminate 100,000 prior preferred shares, 100,000 convertible second preferred shares and 222,223

common shares, all of which are authorized but unissued.

The Binks Manufacturing Company, Chicago, has announced the following appointments in its sales organization: H. J. Fink, to direct sales and service in Colorado, Kansas, Nebraska, Wyoming, Montana and New Mexico, from headquarters at 346 Grant street, Longmont, Colo.; C. J. Rood, appointed manager of the branch office at 117 E. Michigan avenue, Indianapolis, Ind., to direct sales and service in Indiana; M. B. Scully, to handle sales and service in northern Illinois and Iowa, with headquarters at 1028 S. Euclid avenue, Princeton, Ill.; E. J. Cremer, to handle sales and service in southern Illinois and Missouri, with headquarters at 705 Olive street, St. Louis; B. R. Fulton, to be in charge of the new and enlarged direct factory sales and service branch at 1231 W. Ninth street, Cleveland, Ohio, handling sales and service for the Ohio territory; and Harvey J. Dueeno, appointed manager of the direct factory sales and service branch in Milwaukee, Wis., to be responsible for sales and service throughout Wisconsin, peninsular Michigan, Minnesota, North Dakota and South Dakota. This office was recently moved into larger quarters at 1123 N. Jackson street.

M. S. Downes, whose appointment as general sales manager of the railway division of the Timken Roller Bearing Company was announced in the *Railway Age* of March 5, page 66, was born on September 11, 1901, in Buckhannon, W. Va., and attended the public schools there. In 1924 he was graduated from the Carnegie Institute of Technology



M. S. Downes

with a degree in mechanical engineering. Immediately after, he was awarded a scholarship which, by 1925, enabled him to earn his master of science degree in mechanical engineering. He joined Timken as an engineer in 1926 and two years later was transferred to the then newly formed railway division. In 1928 he was appointed assistant to the gen-

eral manager, holding that position until his recent appointment.

J. E. McCort, whose appointment as assistant general sales manager of the division also was announced in the *Railway Age* of March 5, was born on May 19, 1913, in Cleveland, Ohio, and received his higher education at Purdue University. He joined Timken as a service engineer in the Canton, Ohio,



J. E. McCort

office in 1937, after a year on special assignment with the Wheeling & Lake Erie. In 1939 he was transferred to Cleveland as sales engineer and, in 1943, was appointed district manager of the railway division, the position he held at the time of his recent appointment.

R. B. Putnam has been appointed to the newly created position of general sales manager of the American Lumber & Treating Co. at Chicago. Mr. Putnam, who has served as advertising manager and sales promotion manager of the company, will continue to direct those activities in addition to his new duties.

The Clark Equipment Company has announced the transfer of substantially all the assets of its Celfor tool division, at Buchanan, Mich., to Avildsen Tools & Machines, Inc., of Chicago and New York. Certain of the key personnel of the Celfor division are to join Avildsen. As a large user of Celfor tools, Clark Equipment will have a continuing interest in their production by Avildsen; the new Celfor division of Avildsen will maintain adequate service to users and distributors of Celfor tools.

J. U. Neil has been appointed manager of the parts division of the locomotive and car equipment divisions of the General Electric Company. Mr. Neil has been associated with the company for more than 22 years and has been engaged in work on design, application, sale and servicing of electric transportation equipment and, before his recent appointment, was assistant manager of the parts division.

The Pyle-National Company has announced the appointment of T. W. Milligan as manager of the firm's central sales division, with headquarters at Chicago, and James V. Baker as assistant manager of the division, with head-



T. W. Milligan

quarters at Cleveland, Ohio. Mr. Milligan joined Pyle-National in 1945, and, after two years in the St. Paul (Minn.) office, was appointed manager of the western division. He attended Cornell University, and was in the Marine Corps air forces from 1941 to 1945.



James V. Baker

Mr. Baker joined the company in 1919 as sales and service engineer, and for a number of years, handled general special assignments throughout the country. For the last six months he has been assisting in the organization of the central sales division.

A. H. Woollen, chief engineer of the railroad division of the Aluminum Company of America, at New Kensington, Pa., has assumed inactive status for reasons of health.

F. Zimmerman, vice-president of the Broderick & Bascom Rope Co., St. Louis, Mo., who has been in charge of sales, has assumed the new title of director of sales. J. J. Sieber, formerly chief

product engineer, has been appointed sales manager.

Augustus H. Elliot, vice-president of the southern wheel division of American Brake Shoe Company, has retired after 40 years with the company.

The Schaible Company, Cincinnati, Ohio, has announced the acquisition of the D. T. Williams Valve Company, also of Cincinnati. Michael F. Schaible, president and general manager of the firm, has outlined plans to expand the Williams operations both in production and marketing, particularly in industrial fields covering general industry, oil and gas, public works and marine and railroad transportation. Cara L. Lane, works manager of Schaible's parent plant, also will direct operations of the Williams plant, and Clifford B. Mueller, general sales manager of Schaible, also will direct sales of the Williams division.

The Timken Roller Bearing Company has moved its railway division office in New York to 165 Broadway, New York 6. This office will be the new headquarters for V. F. Murray, district manager of the division.

OBITUARY

Lawrence H. Lund, vice-president and treasurer of the Westinghouse Electric Corporation and an official of many of its subsidiary firms, died on March 14 of a heart attack. He was 52 years old.

CONSTRUCTION

Bessemer & Lake Erie.—This road has authorized installation of a fire protection system in its shops at Greenville, Pa., at a probable cost of \$112,000.

ABANDONMENTS

Applications have been filed with the Interstate Commerce Commission by:

Chicago, Burlington & Quincy.—To abandon a 23.5-mi. line between Kirksville, Mo., and Green City. The application stated that the three stations between those points are on an improved highway and that rail service would be continued at both Kirksville and Green City.

Pacific Electric.—To abandon several sections of line totaling approximately 55 miles in the Los Angeles, Calif. area. The application stated that the proposed abandonments are part of a modernization program which will also involve discontinuance of passenger service on other lines retained for

freight service, and the inauguration of some new motor coach operations along with the sale of others to an independent bus operator. The program is expected to involve an expenditure of approximately \$4,500,000.

Division 4 of the I.C.C. has authorized:

Lehigh Valley.—To abandon a 3.2-mi. section of its Barber's Quarry branch in Allentown, Pa. The application stated that the track on the section was removed in the early part of World War II during a scrap drive.

FINANCIAL

Would Have I.C.C. Approve Nickel Plate Lease of Wheeling

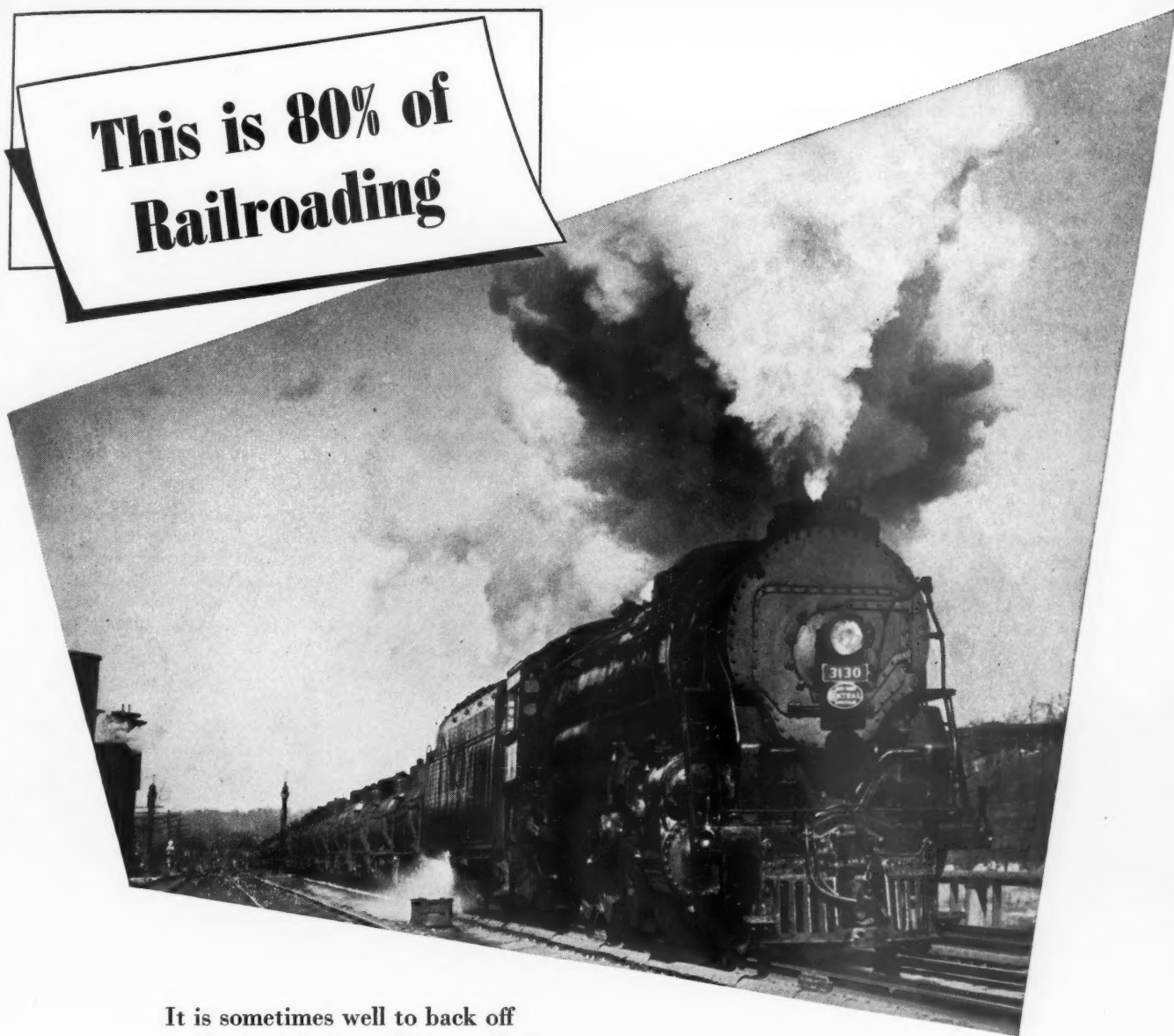
Approval of the New York, Chicago & St. Louis' plan to lease the properties of the Wheeling & Lake Erie has been recommended to the Interstate Commerce Commission in a proposed report by Examiners Jerome K. Lyle and Grace M. Eddy. The Nickel Plate is now the controlling stockholder in Wheeling, having built its holdings to 79.35 per cent of the voting shares pursuant to authorizations received from the commission over the past two years.

In advising the commission to approve the lease proposal, the Lyle-Eddy report also recommended that such approval be made subject to several conditions, including one which would require the Nickel Plate to set aside funds each year for purchase of minority holdings of Wheeling stock. The proposed condition would be a modified version of one suggested by intervenors, including the Pennroad Corporation, which has the largest minority holdings (59,500 shares) in Wheeling. Meanwhile, the examiners would have the commission impose the condition only if the minority stockholders grant "appropriate" options to the Nickel Plate; the amount to be set aside each year would depend upon Nickel Plate earnings.

The proposed lease would be for 99 years, renewable for like terms perpetually. As to rent, the Nickel Plate has agreed to assume liability for all Wheeling obligations and to pay quarterly an amount equal to \$1 per share of the Wheeling's prior-lien stock and \$1.4375 per share of its common stock—except that no payment would be made with respect to any Wheeling shares owned by the Nickel Plate. On an annual basis, these rental payments would be equivalent to dividends on the stock of \$4 and \$5.75, respectively; they would total \$2,680 on the prior-lien stock and \$537,280 on the common, thus adding \$539,960 to the Nickel Plate's annual fixed charges.

Other provisions of the proposed lease stipulate that the Nickel Plate would provide such funds as may be necessary to preserve the Wheeling's

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and take a look at the overall picture.

We're thinking of the steam locomotive. These locomotives
are producing three *billion* ton-miles—and will do it again tomorrow
and the next day. They—these steam locomotives—are doing 80 per
cent of the work on the railroads—more work than
they ever did in any year before 1941.

Many of these locomotives are old, too old, and have distorted
the statistics on performance. Many, however, are modern. And
on modern steam power—locomotives that pack 5000 to 9000
horsepower and can stay on the road for 16 and 18 hours, and then
turn around in an hour or two—the statistics look pretty good.

We build such modern power—and are convinced that it has its place.



DIVISIONS: Lima, Ohio — Lima Locomotive Works
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Works Co. Middletown, Ohio — The United Weld-
ing Co.

PRINCIPAL PRODUCTS: Locomotives; Cranes and shov-
els; Niles heavy machine tools; Hamilton diesel and
steam engines; Hamilton heavy metal stamping presses;
Hamilton-Kruse automatic can-making machinery; Spe-
cial heavy machinery; Heavy iron castings; Weldments.

corporate existence; pay all taxes assessed against the Wheeling properties or income; and provide "reasonable" depreciation and amortization arrangements for the leased property. Also there would be provisions relating to capital expenditures and improvements on the leased properties, accounting, and return of the leased properties if the lease should be terminated.

As to those provisions of the lease which call for assumption by the Nickel Plate of Wheeling obligations, the examiners recommended that the commission grant what they consider the necessary authority under the Interstate Commerce Act's section 20a. These obligations include \$12,681,000 of bonds; \$16,810,000 of equipment trust obligations; and \$6,645,800 of promissory notes. Also there are sinking-fund obligations in connection with some of the bonds. Other provisions of the proposed lease fall within the scope of section 5 (2).

The Nickel Plate now operates 1,687 miles of road; the Wheeling operates 505 miles, all within Ohio. The examiners viewed the proposed lease generally as a "sequel to preliminary steps toward unification of the Wheeling and Nickel Plate previously authorized by the commission in the control cases." They recalled that the commission's reports in those earlier cases found that the two roads were "naturally complementary and not competitive." They went on to say that the present record "warrants similar findings." They suggested that a consolidation or merger plan might have been preferable to the lease proposal, but they were convinced from the record that no such plan could be presented "at any reasonable time in the future." The minority stockholders of the Wheeling share that view, the proposed report added.

Meanwhile, however, the proposed condition which would require the Nickel Plate to set aside funds for purchase of these minority holdings seems calculated to pave the way for consolidation. The condition would require the Nickel Plate, after making provision for payment of the current annual dividend on its preferred stock and not more than \$12 annually on the accumulated dividends thereon, to set aside annually 15 per cent of its remaining earnings, or \$200,000, whichever were less, to be used as the stock-purchase fund.

The "reasonable" options required of Wheeling holders would permit the call of the common by lot, for purposes of the purchase fund, at prices ranging from \$122.50 to par (\$100), the latter to be reached after the lease had been in effect 50 years. The options would further call for sales to the Nickel Plate, other than for purposes of the purchase fund, at prices ranging from \$125 to par. And nothing in the options would be construed as preventing the Nickel Plate from purchasing in the open market, "at whatever price it may

desire to pay," any or all Wheeling stock offered.

Another condition which the examiners would have the commission attach to its approval of the lease would require the Nickel Plate to "keep open all routes and channels of trade via existing junctions and gateways, unless and until otherwise ordered by the commission." A more comprehensive series of conditions along that line had been sought by the Akron, Canton & Youngstown, which also intervened in the proceeding. The examiners said many of the arrangements which the A. C. & Y. sought to have perpetuated, or required, have been the subject of dispute between that road and the Nickel Plate and Wheeling for many years. The recommended condition is the same as that imposed by the commission when it authorized the Nickel Plate to acquire control of the Wheeling. "No additional restrictive conditions should be attached herein if the public interest sought to be served by the lease plan is to be fully accomplished," the proposed report said.

Employees represented by union parties to the so-called Washington Job Protection Agreement of 1936 will be protected by that agreement, the examiners noted. They went on to recommend imposition of conditions for the protection of unrepresented employees who might be adversely affected by the proposed lease. They also recommended denial of motions filed by a Nickel Plate preferred stockholder who sought to have the proceeding dismissed. The proceeding is Finance Docket No. 16308.

Investment House Publications

[The surveys listed herein are, for the most part, prepared by financial houses for the information of their customers. Knowing that many such surveys contain valuable information, *Railway Age* lists them as a service to its readers but assumes no responsibility for facts or opinions they may contain bearing upon the attractiveness of specific securities.]

Baker, Weeks & Harden, One Wall st., New York 5.

Reading Railroad. Highlights of address by R. W. Brown before the New York Society of Security Analysts, Feb. 15, 1949.

Union Pacific. (Mar. 7).

Useful Comparative Statistics of Railroads. Operating and financial performance as revealed in certain significant ratios (Mar. 18).

Paine, Webber, Jackson & Curtis, 25 Broad st., New York 4.

Bangor and Aroostook Railroad (Feb. 24).

Railroad Review (Mar. 15).

L. F. Rothschild & Co., 120 Broadway, New York 5.

Great Northern Railway Preferred Stock (Mar. 2).

New Orleans, Texas & Mexico Railway Company First Mortgage Bonds (Mar. 15).

Vilas & Hickey, 49 Wall st., New York 5.

Comparison of Railroad Income Bonds (Mar. 11).

Ogden Union Railway & Depot.—Operating Agreement.—This company and its two proprietary roads, the Union Pacific and the Southern Pacific, together with their respective subsidiaries, the Oregon Short Line and the Central Pacific, have applied to the Interstate Commerce Commission for approval of amendments to the agreement dated September 1, 1920, covering operation of the Depot Company's facilities at Ogden, Utah. The application states that the amended agreement would cure what they consider inequities resulting from the application of the original agreement to gradually changed conditions in the terminal since 1920.

Pennsylvania-Wabash.—Control of D. T. & I.—The Interstate Commerce Commission has postponed, from March 22 until April 19, the public hearing on the application of these roads for authority to acquire control of the Detroit, Toledo & Ironton from the Pennroad Corporation. The hearing will be held at Washington, D. C.

Southern.—Would Absorb Atlantic & Yadkin.—A plan to take the 130-mi. Atlantic & Yadkin into the Southern and operate it as part of the Southern System was announced this week by Ernest E. Norris, president of the Southern. The Southern owns all the capital stock of the A. & Y. and is the guarantor of its outstanding bonds. Mr. Norris said the Southern has arranged to put up \$1,500,000 to take up that amount of A. & Y. bonds when they mature on April 1. The plan of integration is subject to a vote of the Southern's stockholders and approval of the Interstate Commerce Commission. "When the integration is effected," Mr. Norris said, "E. L. Faulconer, president of the A. & Y., who has done such a good job of running the road, will remain in Greensboro and his field of usefulness will be enlarged by his appointment as executive general agent of the Southern System."

New Securities

Applications have been filed with the Interstate Commerce Commission by:

Chicago, Milwaukee, St. Paul & Pacific.—To assume liability for \$6,060,000 of series HH equipment trust certificates to finance in part 2,022 steel box cars at a unit cost of \$4,000 and a total estimated cost of \$8,088,000. Construction of these cars was started last September in the applicant's Milwaukee (Wis.) shops. The certificates would be dated April 1, and would mature in 30 semi-annual installments of \$202,000 each, beginning October 1, 1949. They would be sold on the basis of competitive bids and the interest rate would be fixed by such bids.

Missouri Pacific.—To assume liability

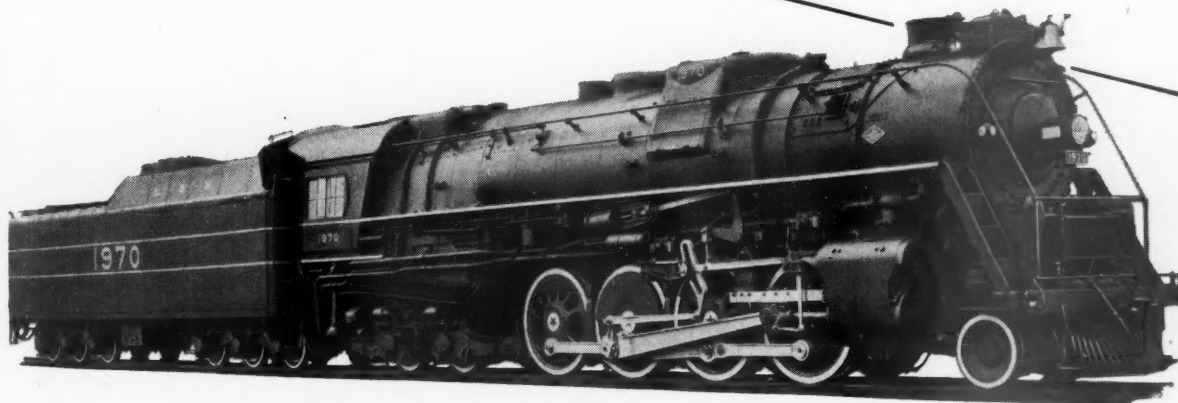
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for \$4,320,000 of series LL equipment trust certificates to finance in part the acquisition of 1,000 70-ton steel hopper car to be built by the Bethlehem Steel Company at a cost of \$5,100 each and 3 1,000-hp. Diesel-electric switching locomotives to be built by the American Locomotive Company at a cost of \$104,196 each. Total estimated cost of this equipment is \$5,412,588. The certificates would be dated April 15 and would mature in 15 annual installments of \$288,000 each, beginning April 15, 1950. They would be sold on the basis of competitive bids and the interest rate would be fixed by such bids.

Division 4 of the I.C.C. has authorized: **Missouri-Kansas-Texas.**—To assume liability for \$2,550,000 of equipment trust certificates to finance in part two Diesel-electric passenger locomotives and 500 hopper cars at an estimated total cost of \$3,328,035 (see *Railway Age* of February 19, page 62). The certificates will be dated April 1 and will mature in 30 semi-annual installments of \$85,000 each, beginning October 1. The commission's report approved a selling price of 98.8676 with a 2½ per cent interest rate—the bid of Halsey, Stuart & Co. and associates, which will make the average annual interest cost approximately 2.68 per cent. The certificates were reoffered to the public at prices yielding from 1.4 to 2.875 per cent, according to maturity.

New York Central.—To assume liability for \$12,300,000 of equipment trust certificates to finance in part 38 Diesel-electric locomotives, 38 passenger cars and 1,100 freight cars, estimated to cost approximately \$15,996,085 (see *Railway Age* of February 26, page 58). The certificates will be dated March 15 and will mature in 15 annual installments of \$820,000 each, beginning March 15, 1950. The commission's report approved a selling price of 99.1126 with a 2½ per cent interest rate—the bid of Halsey, Stuart & Co., and associates, which will make the average annual interest cost approximately 2.78 per cent. The certificates were reoffered to the public at prices yielding from 1.5 to 2.9 per cent, according to maturity.

Southern.—To assume liability for \$11,850,000 of series QQ equipment trust certificates to finance in part 95 Diesel-electric locomotive units, estimated to cost approximately \$15,800,000 (see *Railway Age* of February 26, page 58). The certificates will be dated April 1 and will mature in 30 semi-annual installments of \$395,000 each, beginning October 1. The commission's report approved a selling price of 99.0413 with a 2¾ per cent interest rate—the bid of Salomon Bros. & Hutzler and associates, which will make the average annual interest cost approximately 2.52 per cent. The certificates were reoffered to the public at prices yielding from 1.35 to 2.7 per cent, according to maturity.

Dividends Declared

Chicago, Aurora & Elgin.—certs. of beneficial int., class B (initial), 17¢, payable April 15 to holders of record April 1.
Mahoning Coal.—\$12.50, payable April 1 to holders of record March 25.
Providence & Worcester.—\$2.50, payable April 1 to holders of record March 14.

Spokane International.—\$2.50, annual, payable April 1 to holders of record March 22.
Texas & Pacific.—\$1.00, payable March 31 to holders of record March 23.

Average Prices Stocks and Bonds

	Mar. 22	Last week	Last year
Average price of 20 representative railway stocks	38.44	39.04	48.81
Average price of 20 representative railway bonds	86.93	87.90	86.44

RAILWAY OFFICERS

EXECUTIVE

Harry C. Oliver, assistant vice-president—traffic, of the Pennsylvania at New York, has been granted a leave of absence to become president of the Harborside Warehouse Company, Jersey City, N. J., as announced in the *Railway Age* of March 19, page 619. Mr. Oliver has had a long and active career in the P.R.R.'s freight traffic department, serving as division freight



Harry C. Oliver

agent at Richmond, Ind., and Toledo, Ohio, before his appointment as general freight agent at Pittsburgh, Pa., in 1925. Two years later he was named freight traffic manager there, occupying that position until his promotion to assistant vice-president—traffic at New York in 1943. He served overseas during World War I as a captain of infantry.

C. S. J. Flood has been appointed assistant to the president of the Manufacturers Railway, the St. Louis & O'Fallon and the St. Louis Refrigerator Car Company at St. Louis, Mo.

FINANCIAL, LEGAL & ACCOUNTING

F. V. Slocum, assistant general attorney of the Grand Trunk Western at Detroit, Mich., has been promoted to

general attorney at that point, succeeding **Wm. W. Macpherson**, retired.

OPERATING

E. P. Gangewere, whose appointment as assistant general manager of the Reading at Reading, Pa., was reported in the *Railway Age* of March 12, was born at Bethlehem, Pa., on November 17, 1900, and attended high school at Chattanooga, Tenn. During 1917 and 1918 he worked as an apprentice in the machine shop of the Wheland Machine Company at Chattanooga and later attended Lehigh University, receiving the degree of mechanical engineer in 1922. Mr. Gangewere entered the service of the Reading in July, 1922, as a special apprentice on the staff of the assistant superintendent motive power, subsequently becoming motive power inspec-



E. P. Gangewere

tor. In 1925 he was promoted to mechanical supervisor and from 1927 to 1933 served successively as enginehouse foreman at Saucon Creek and Bethlehem, and as assistant master mechanic at Philadelphia, Pa. In 1933 he was appointed assistant superintendent of the Reading locomotive shop and on January 1, 1939, became assistant superintendent of motive power and rolling equipment. Mr. Gangewere was appointed superintendent of motive power and rolling equipment in January, 1942, which position he held until his recent appointment as assistant general manager.

The office of general superintendent of the Chicago Great Western at Oelwein, Iowa, has been discontinued; **H. Boller** has been appointed assistant superintendent of the Minnesota division, at St. Paul, Minn.

F. H. Cook, superintendent of the International-Great Northern (part of the Missouri Pacific Lines) at Palestine, Tex., has been advanced to assistant general manager and superintendent of transportation at that point. In the former post, he succeeds **L. A. Gregory**, whose promotion to general su-

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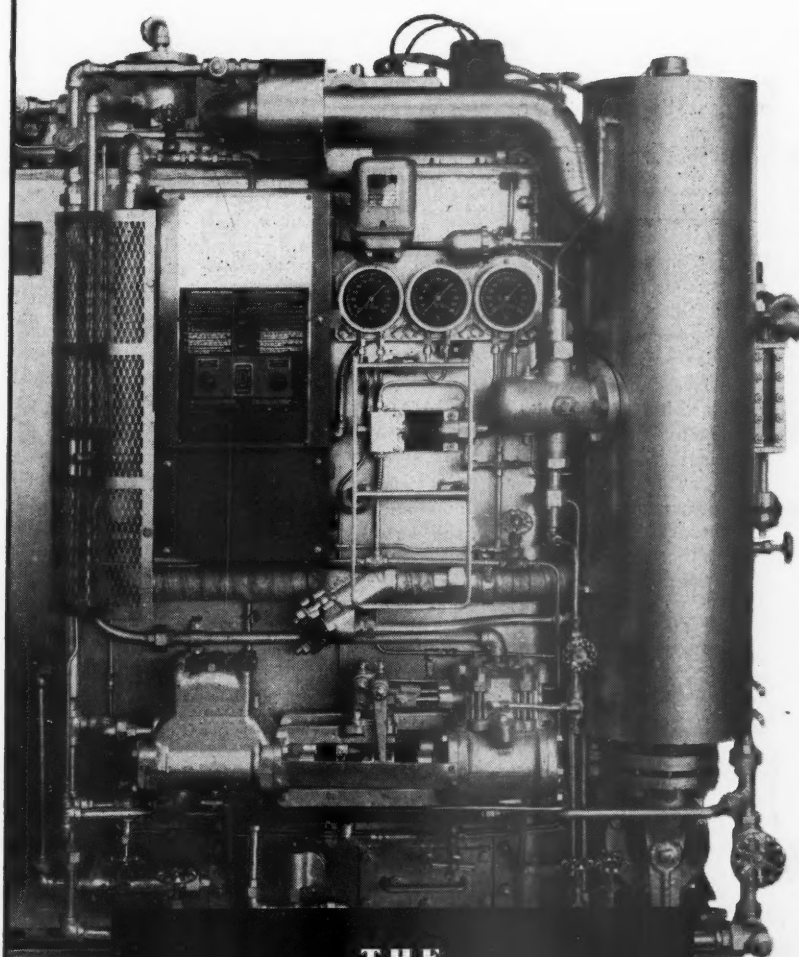
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perintendent of transportation was reported in the *Railway Age* of March 19. **R. Johnson**, assistant superintendent of the Gulf Coast Lines (also part of M. P.) at DeQuincy, La., has been promoted to replace Mr. Cook, and has been succeeded by **G. M. Holzmann**, trainmaster at Palestine. **W. L. Fagan**, trainmaster at DeQuincy, has been transferred to succeed Mr. Holzmann, and has, in turn, been replaced by **R. D. Morris**, division trainmaster, Coast Lines, at Kingsville, Tex. **R. S. Slay** has been appointed to replace Mr. Morris. **D. T. Barksdale**, trainmaster, Coast Lines, at Harlingen, Tex., has been granted a sick leave, and has been succeeded by **C. G. Taylor**.

H. J. Taylor has been appointed assistant to general superintendent of transportation for the St. Louis-San Francisco, at Springfield, Mo.

TRAFFIC

The St. Louis-San Francisco has announced the following changes in its traffic department: **O. P. Rainey**, traffic manager at Birmingham, Ala., transferred to Memphis, Tenn., succeeding **J. W. Mahanay**, promoted to assistant to the vice-president at St. Louis, Mo.; **V. H. Biedermann**, general agent at New Orleans, La., advanced to succeed Mr. Rainey and succeeded by **W. T. Rutherford**, soliciting freight and passenger agent at Dallas, Tex.; **H. D. Sweetin**, traffic manager at St. Louis, appointed freight traffic manager—sales and service at that point, and succeeded by **W. A. Young**, freight traffic manager at St. Louis; **C. H. Gray**, traffic manager at Tulsa, Okla., transferred to St. Louis as freight traffic manager—sales and service, and succeeded by **J. W. Tipton**, general agent at Atlanta, Ga.; **J. L. Skaggs**, general agent at Little Rock, Ark., appointed to succeed Mr. Tipton has in turn been succeeded by **H. J. Key**, traffic representative at Little Rock; and **J. M. Sachen**, assistant to the traffic vice-president at St. Louis, appointed to the newly created post of general agent at that point.

J. C. McCloy, city passenger agent of the Louisville & Nashville at Louisville, Ky., has been appointed district passenger agent at Pensacola, Fla.

A. P. Courvoisie, division freight agent of the Seaboard Air Line at Tampa, Fla., has been appointed district freight agent at Fort Myers, Fla. **M. E. McRae**, commercial agent at Tampa, has been appointed district freight agent there. The position of division freight agent at Tampa has been abolished, as has that of general agent at Fort Myers, the latter vacated by the retirement of **F. H. Bryant**.

Lewis A. McDaniel has been appointed general agent of the Kansas City Southern at San Francisco, Cal.

The Illinois Terminal has announced the appointment of **W. R. Lankford** as assistant general freight agent, sales and service, at St. Louis, Mo. **J. H. Dierker**, general freight agent at St. Louis, has resigned to accept a position with another carrier.

Ian Warren, assistant passenger traffic manager of the Canadian Pacific, has been appointed passenger traffic manager, with headquarters as before at Montreal, Que., effective April 1, succeeding **R. G. McNeillie**, who will retire on March 31, after 48 years with the C.P.R.

J. M. White, superintendent agencies and transfers of the Norfolk Southern at Raleigh, N. C., has been appointed assistant to traffic manager, sales and service, at Norfolk, Va.

MECHANICAL

J. P. Francis, assistant master mechanic of the Eastern division of the Pennsylvania at Pittsburgh, Pa., has been appointed master mechanic of the Williamsport division at Renovo, Pa., succeeding **G. R. Weaver**, who has been transferred to the Eastern division at Pittsburgh.

ENGINEERING & SIGNALING

James J. Ginty, superintendent of signals of the Canadian National at Montreal, Que., retired on March 19, after 36 years with that road. Mr. Ginty was born at Somerset, N. Y., and began his career with the C.N.R. in 1913 as general signal foreman at Montreal, becoming signal inspector in 1916 and supervisor of signals two years later. He was appointed superintendent of signals in 1920.

SPECIAL

P. E. Ayrhart, assistant to director of labor relations of the Canadian National, has been appointed manager, labor relations, with headquarters as before at Montreal, Que. **F. E. Jones**, superintendent of labor relations, has been appointed assistant manager, labor relations. **H. F. Walker**, manager of the National Terminals of Canada, Ltd., the Montreal Fruit & Produce Terminal Co. and the Montreal Stock Yards Company, has been appointed superintendent, personnel, C.N.R. **F. E. Carlin**, assistant superintendent, Laurentian division, at Quebec, Que., has been appointed assistant superintendent, labor relations.

Mr. Ayrhart was born at Mountain View, Ont., and entered railroad service in 1913 as a stenographer with the Grand Trunk Pacific (now C.N.R.) at Wainwright, Alta., later serving as clerk and accountant. In 1919, after three years of war service in England and France, he became assistant ac-

countant at Edmonton, Alta., and in 1921 was promoted to accountant. He was appointed traveling accountant at Winnipeg in 1923; chief timekeeper in 1929; personnel investigator at Montreal in 1933; assistant chief clerk in the office of the regional vice-president at Winnipeg in 1937; staff inspector in the personnel department at Montreal in 1938, and assistant to director of labor relations in April, 1942.

Mr. Jones was born at Stratford, Ont., and began his career in 1907 as a clerk with the Canadian Express Company at Toronto, Ont., transferring to the motive power department of the Grand Trunk (now C.N.R.) in 1910. After serving in various capacities, he became chief clerk in 1931, senior clerk in the office of the vice-president and general manager at Toronto in 1940, staff inspector in the department of labor relations in August, 1942, and labor relations representative in 1945. Two years later he was appointed superintendent of labor relations and served in that capacity until his present appointment.

Mr. Walker was born at Picton, Ont., and entered railroad service in 1912 as a clerk in the transportation department of the Grand Trunk at Toronto. He served in the Canadian Expeditionary Forces from 1915 to 1919. In 1926 he became chief clerk in the transportation department and four years later was appointed freight agent for the Canadian National at Ottawa, Ont., transferring to Montreal in 1938. He was appointed manager of the National Terminals of Canada, Ltd., in April, 1948, and shortly afterwards added the managership of the Montreal Fruit & Produce Terminal Co. and the Montreal Stock Yards Company to his responsibilities.

Mr. Carlin was born at St. Gabriel de Grandon, Que., and first entered C.N.R. service in 1919 as a stenographer at Montreal, later serving successively as brakeman, secretary and car service clerk until 1927, when he became divisional car supervisor at Montreal. He was subsequently transferred to Cochrane, Ont., and in 1942 became district car distributor at Quebec, Que., later serving as traveling car service agent, traveling transportation assistant and trainmaster, successively. In 1946 Mr. Carlin was promoted to assistant superintendent of the St. Lawrence division at Montreal, transferring to the Laurentian division at Quebec the following year.

OBITUARY

Paul N. Fox, chief mechanical engineer of the Detroit, Toledo & Ironton at Dearborn, Mich., died on February 27 after a long illness.

Thomas F. Dixon, vice-president, operating department, of the Great Northern, died in his home at St. Paul, Minn., on March 22.

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OPERATING REVENUES AND OPERATING EXPENSES OF CLASS I STEAM RAILWAYS

Compiled from 127 monthly reports of revenues and expenses representing 131 Class I steam railways.

(Switching and Terminal Companies Not Included)

FOR THE MONTH OF DECEMBER 1948 AND 1947

Item	United States		Eastern District		Southern District		Western District	
	1948	1947	1948	1947	1948	1947	1948	1947
Miles of road operated at close of month.....	226,681	227,279	53,513	53,705	46,032	46,147	127,136	127,427
Revenues:								
Freight.....	\$648,027,909	\$627,924,918	\$245,989,071	\$230,190,002	\$133,000,786	\$131,599,208	\$269,038,052	\$266,135,708
Passenger.....	90,671,455	89,461,887	47,880,980	46,724,942	14,541,757	13,320,758	28,248,718	29,416,187
Mail.....	23,182,618	41,415,683	7,573,194	12,776,853	4,619,142	8,323,804	10,990,282	20,315,026
Express.....	9,845,947	12,800,059	2,616,750	3,540,108	1,906,029	2,281,557	5,323,168	6,978,394
All other operating revenues.....	34,826,019	32,714,261	16,712,408	13,965,784	5,479,916	5,757,958	12,633,695	12,990,519
Railway operating revenues.....	806,553,948	804,316,808	320,772,403	307,197,689	159,547,630	161,283,285	326,233,915	335,835,834
Expenses:								
Maintenance of way and structures	107,384,298	104,364,253	38,531,372	38,584,403	20,187,621	22,084,256	48,665,305	43,695,594
Depreciation.....	10,719,466	10,538,481	4,602,452	4,555,825	1,946,924	1,822,835	4,170,090	4,159,821
Retirements.....	4,878,102	4,938,464	2,198,217	1,752,720	1,101,678	1,207,622	1,578,207	1,978,122
Deferred maintenance.....	*146,248	*1,266,987	207,482	*6,204	*122,681	*130,363	*231,049	*1,130,420
Amortization of defense projects.....	*67,396	169,702	19,047	11,892	49,799	45,304	*136,242	112,506
Equalization.....	930,674	*568,142	2,464,121	797,295	*1,567,086	*674,578	33,639	*690,859
All other.....	91,069,700	90,552,735	29,040,053	31,472,875	18,778,987	19,813,436	43,250,660	39,266,424
Maintenance of equipment.....	152,142,254	138,743,474	65,686,238	58,960,045	29,943,912	27,469,580	56,512,104	52,313,849
Depreciation.....	22,128,903	19,115,800	8,680,331	7,162,093	4,891,876	4,412,693	8,556,696	7,541,014
Retirements.....	*93,306	*107,861	2,995	*15,545	*22,489	*73,127	*73,812	*73,189
Deferred maintenance and major repairs.....	519,381	*191,647	826,388	92,693	*50,240	*88,991	*256,767	*195,349
Amortization of defense projects.....	1,226,017	1,251,186	452,113	452,341	238,911	239,223	534,993	559,622
Equalization.....	*962,907	*923,870	*288,227	*87,596	*694,420	*582,931	19,740	*253,343
All other.....	129,324,166	119,599,866	56,012,638	51,356,059	25,580,274	23,508,713	47,731,254	44,735,094
Traffic.....	17,679,851	16,043,549	6,443,813	5,608,316	3,786,114	3,489,330	7,449,924	6,945,903
Transportation—Rail line.....	334,704,188	337,399,393	142,471,530	146,971,924	61,287,336	62,355,746	130,945,322	128,071,723
Miscellaneous operations.....	11,262,341	11,873,972	4,378,237	4,517,398	1,696,294	1,737,820	5,187,810	5,618,754
General.....	25,568,632	22,945,019	10,461,550	8,750,696	5,508,127	5,311,736	9,598,955	8,882,587
Railway operating expenses.....†	648,741,564	631,369,660	267,972,740	263,392,782	122,400,404	122,448,468	258,359,420	245,528,410
Net revenue from railway operations.....	157,812,384	172,947,148	52,799,663	43,804,907	37,138,226	38,834,817	67,874,495	90,307,424
Railway tax accruals.....	81,604,936	80,852,693	26,244,372	18,004,546	20,557,400	18,664,467	34,803,164	44,183,680
Pay-roll taxes.....	21,578,888	31,196,212	9,038,780	12,930,036	4,147,240	6,077,120	8,392,868	12,189,056
Federal income taxes†.....	33,659,296	23,908,619	9,969,808	*3,991,755	11,068,248	6,808,774	15,621,240	21,091,600
All other taxes.....	26,366,752	25,747,862	10,235,784	9,066,265	5,341,912	5,778,573	10,789,056	10,903,024
Railway operating income.....	76,207,448	92,094,455	26,555,291	25,800,361	10,580,826	10,770,350	33,071,331	46,123,744
Equipment rents—Dr. balance.....	8,995,833	11,443,199	4,154,321	6,353,985	*1,483,594	*1,494,203	6,325,106	6,583,417
Joint facility rent—Dr. balance.....	2,549,676	3,982,163	1,094,874	1,756,256	389,167	715,460	1,065,635	1,510,447
Net railway operating income.....	64,661,939	76,669,093	21,306,096	17,690,120	17,675,253	20,949,093	25,680,590	38,029,880
Ratio of expenses to revenues (percent)	80.4	78.5	83.5	85.7	76.7	75.9	79.2	73.1

FOR THE TWELVE MONTHS OF 1948 AND 1947

Item	United States		Eastern District		Southern District		Western District	
	1948	1947	1948	1947	1948	1947	1948	1947
Miles of road operated at close of month.....	226,981	227,415	53,594	53,724	46,123	46,181	127,264	127,510
Revenues:								
Freight.....	\$7,976,172,815	\$7,042,806,057	\$3,035,316,702	\$2,661,391,118	\$1,627,800,273	\$1,462,245,830	\$3,313,055,840	\$2,919,169,109
Passenger.....	964,303,426	963,332,395	494,883,784	486,828,740	150,107,288	153,413,015	319,312,354	323,090,640
Mail.....	199,939,409	170,181,615	71,103,204	61,300,939	36,211,356	30,985,818	92,624,849	77,894,858
Express.....	117,631,163	115,838,358	38,276,714	33,635,206	20,026,794	20,547,894	59,327,655	61,655,258
All other operating revenues.....	413,529,448	394,485,685	184,082,718	173,368,563	67,864,685	66,870,428	161,582,045	154,246,694
Railway operating revenues.....	9,671,576,261	8,686,644,110	3,823,663,122	3,416,524,566	1,902,010,396	1,734,062,985	3,945,902,743	3,536,056,559
Expenses:								
Maintenance of way and structures	1,347,720,967	1,212,816,831	499,928,206	443,699,847	278,749,020	263,258,902	569,043,741	505,858,082
Depreciation.....	124,791,259	122,292,282	52,963,655	52,320,087	21,834,312	20,963,744	49,993,292	49,008,451
Retirements.....	17,565,976	17,382,641	5,429,771	4,451,323	2,812,431	3,774,551	9,323,774	9,156,767
Deferred maintenance.....	*3,502,086	*7,363,955	205,515	*284,546	*1,131,997	*1,085,087	*2,575,604	*5,994,322
Amortization of defense projects.....	1,839,306	1,398,549	175,614	84,274	542,968	449,661	1,120,724	864,614
Equalization.....	87,864	105,091	*3	*3			87,867	105,091
All other.....	1,206,938,648	1,079,002,223	441,153,654	387,128,709	254,691,306	239,156,033	511,093,688	452,717,481
Maintenance of equipment.....	1,702,897,265	1,558,126,447	722,624,396	666,840,784	342,834,068	313,292,218	637,438,801	577,993,445
Depreciation.....	250,826,003	230,467,374	98,894,347	91,853,417	55,584,743	51,138,605	96,346,913	87,475,352
Retirements.....	*1,030,977	*563,525	*124,436	*83,665	*289,375	*127,606	*617,166	*352,254
Deferred maintenance and major repairs.....	*2,826,904	*4,029,971	917,388	439,874	*1,323,225	*1,544,532	*2,421,067	*2,925,313
Amortization of defense projects.....	14,729,593	14,809,887	5,397,109	5,518,491	2,867,237	2,958,154	6,465,247	6,333,242
Equalization.....								
All other.....	1,441,199,550	1,317,442,682	617,539,988	569,112,667	285,994,688	260,867,597	537,664,874	487,462,418
Traffic.....	193,817,196	176,331,147	66,927,692	61,089,432	42,000,076	37,837,710	84,889,428	77,404,005
Transportation—Rail line.....	3,821,140,552	3,477,127,063	1,617,976,784	1,504,221,386	704,941,033	644,056,141	1,498,222,735	1,328,849,536
Miscellaneous operations.....	131,744,240	129,166,504	50,198,694	48,287,820	19,436,778	18,810,877	62,108,768	62,067,807
General.....	274,233,866	245,402,747	105,433,481	94,452,383	59,856,459	53,747,524	108,943,926	97,202,840
Railway operating expenses.....‡	7,471,554,086	6,798,970,739	3,063,089,253	2,818,591,652	1,447,817,434	1,331,003,372	2,960,647,399	2,649,375,715
Net revenue from railway operations.....	2,200,022,175	1,887,673,371	760,573,869	597,932,914	454,192,962	403,059,613	985,255,344	886,680,844
Railway tax accruals.....	1,028,530,532	936,529,355	348,510,665	302,795,221	231,351,166	213,622,442	448,668,701	420,111,692
Pay-roll taxes.....	264,930,596	353,489,416	110,085,495	147,532,056	51,812,209	68,932,677	103,032,891	137,024,683
Federal income taxes†.....	448,310,997	297,676,398	117,997,680	48,412,500	113,915,859	85,040,166	216,397,458	164,223,732
All other taxes.....	315,288,939	285,363,541	120,427,489	106,850,665	65,623,098	59,649,599	129,238,352	118,863,277
Railway operating income.....	1,171,491,643	951,144,016	412,063,204	295,137,693	222,841,796	189,437,171	536,586,643	466,569,152
Equipment rents—Dr. balance.....	131,254,223	128,794,796	59,228,193	59,286,853	*16,711,215	*9,537,690	88,737,245	79,045,633
Joint facility rent—Dr. balance.....	37,885,097	41,910,937	18,037,444	20,047,643	5,501,111	6,580,425	14,346,542	15,282,869
Net railway operating income.....	1,002,352,323	780,438,283	334,797,567	215,803,197	234,051,900	192,394,436	433,502,856	372,240,650
Ratio of expenses to revenues (percent)	77.3	78.3	80.1	82.5	76.1	76.8	75.0	74.9

†Includes income tax and surtax.

‡Includes \$15,912,299 accrued in anticipation of major wage awards.

§Includes \$49,595,989 accrued in anticipation of major wage awards.

*Decrease, deficit, or other reverse item.

Compiled by the Bureau of Transport Economics, Interstate Commerce Commission. Subject to revision.

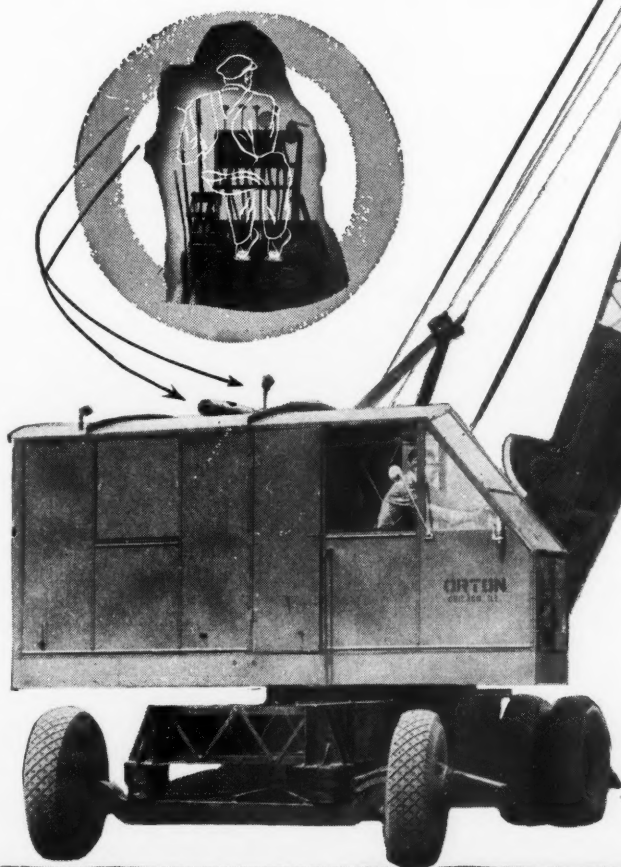


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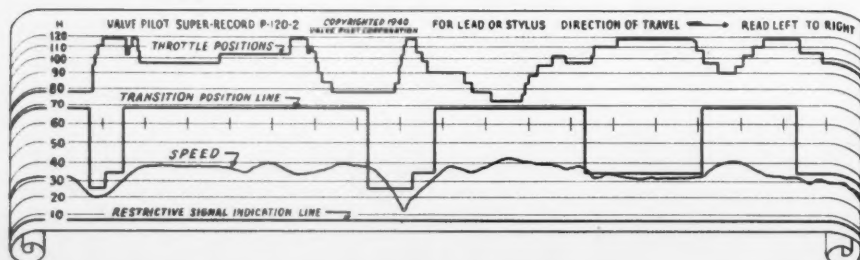




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Current Publications

BOOKS

American Transportation in Prosperity and Depression, by Thor Hultgren. 397 pages, charts and tables. Published by the National Bureau of Economic Research, Inc., 1819 Broadway, New York 23. \$5.

A summary and preview of the data revealed by this study were published in an article by Mr. Hultgren in the *Railway Age* of January 1, 1949, pps. 26-31.

The Locomotives of the Atchison, Topeka & Santa Fe Railway System, by Sylvan R. Wood. 182 pages, illustrations. Published by the Railway & Locomotive Historical Society, Baker Library, Harvard Business School, Boston, Mass. Price, to members, \$2; to non-members, \$3.

This publication—the society's Bulletin No. 75—brings up to date material first published in 1939. Following a brief outline of the origin and development of the Santa Fe and its motive power, is the complete roster of its locomotives from 1869 to 1947—steam, Diesel and gas-electric. This is followed by rosters of locomotives of predecessor and subsidiary lines.

Materials Handling. 96 pages. 8½ x 11 in. Illustrations. Prepared by the General Electric Company, New York. \$1.25.

All persons interested in materials handling will find much of interest in this book. It describes modern methods of materials handling and the receiving, shipping and warehousing phases of industry. There are sections on various types of materials handling equipment and their application; how to make a materials handling survey; engineering data on conveyors, cranes and hoists, trucks and tractors and battery charging; and a section of fundamental formulas for materials handling calculations. Also there is a partial listing of materials handling equipment manufacturers, a list of G. E. apparatus sales offices, and a bibliography of materials handling articles and publications. While this book deals primarily with electric-powered materials handling equipment, much of the engineering data is applicable to gas-propelled vehicles as well, and the discussion of systems based on the various forms and adaptations of the industrial truck is pertinent to use of gas or gas-electric trucks.

The Specifications and Law on Engineering Works, by Walter C. Sadler. 493 pages. Published by John Wiley & Sons, Inc., 440 Fourth ave., New York 16. \$5.

Written as a practical aid for the engineer not trained in law, this book is said to provide a thorough foundation in engineering law for writing foolproof specifications. In addition to a complete description of the engineer's commonly encountered legal problems, a summary of the historical significance of various legal systems is also included to show how

modern courts apply statutes to practical legal questions on engineering works. Among the topics specifically discussed, with examples taken from actual experience, are the legal instruments of contractual documents, illegal matters of concern to engineers, the law on agency partnerships and corporations, patents and workmen's compensation. A complete set of detailed contracts and specifications, covering the construction of a transmitter building for the University of Michigan, is presented in the appendix.

The author is well known among railway engineering officers, principally for his active participation on various committees of the American Railway Engineering Association, of which he has been a member since 1926. He has also served as consulting engineer on numerous railroad projects in addition to his work on municipal contracts. Currently professor of civil engineering at the University of Michigan, Mr. Sadler was formerly in charge of the renegotiation of wartime utility contracts of all government agencies in eight western states. Holding both law and engineering degrees, and having had general supervision of some 15,000 construction contracts, the author brings to his readers a seldom-found combination of theoretical and practical knowledge that should be of great value.

Papers Presented at the Forty-First Annual Meeting of the Smoke Prevention Association of America. 190 pages, illustrations, charts. Published by John Paul Taylor, 520 Pleasant st., St. Joseph, Mich. \$2.

The 15 papers presented before the 1948 meeting of the Smoke Prevention Association of America are assembled in this volume. Two by railroad men are included—"Use of Poster Cartoons and Their Aid in the Elimination of Smoke," by S. E. Back, smoke inspector, Pennsylvania, and "Railroad Management View-Point on Smoke Abatement in Engine-House Territory," by M. G. Stewart, road foreman of engines, Washington Terminal.

Mathematics at Work—Commonly Applied Mathematics with Step-by-Step Solutions of Numerous Mechanical Problems from Practice, by Holbrook L. Horton. 28 chapters, diagrams and tables. Published by the Industrial Press, 148 Lafayette st., New York 13.

As indicated by its title this book is a practical working manual concerning application of fundamental principles of mathematics to solutions of specific problems relating to mechanical work. The problems are classified on a mathematical basis, i.e., problems illustrating some common mathematical principle or method are grouped together. Each problem is presented to show: (1) what the problem is about; (2) how to analyze it and develop a method of attack; (3) what formula is required, if a formula is applicable; (4) how this formula is derived or, if no formula is given, what the step-by-step procedure is for solving the problem; and (5) how a typical example is worked out. Thus, the reader

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with a mathematical problem similar to any of those shown can insert his own data and solve his problem.

The book, while containing no exhaustive treatment of any mathematical subject, presents in the first five chapters a digest of the important elements of arithmetic, algebra, geometry and trigonometry, making this part of the book a valuable source of reference.

PERIODICAL

Inventors' Sales Bulletin, by V. D. Angerman. 32 pages. Published by Science and Mechanics Publishing Company. 49 E. Superior st., Chicago 11, Ill. \$1.

A new product service for manufacturers anxious to get in touch with inventors having patents for sale or for lease on a royalty basis is offered in this brochure which lists 106 firms offering to buy accepted inventions. Under each firm's name and address is given the type of products wanted such as toys, household appliances, aircraft devices or mechanical equipment; whether they prefer products made of wood, metal, plastics, rubber, fabric, or paper; and whether they have engineering, production, financing and sales facilities to really promote an invention aggressively. Manufacturers are invited to list the type of new products they are in the market for in this brochure, which circulates among inventors having patents for sale, and which is published at frequent intervals. Application blanks explaining how to write up requirements can be secured from Mr. Angerman. Listings are free.

TRADE PUBLICATIONS

Whiting Trambeam Overhead Materials-Handling Systems. 44 pages. Published by the Whiting Corporation, Harvey, Ill., and Los Angeles, Cal. Free.

Describes, with pictures and drawings, Whiting light cranes and monorails, suspended by the Trambeam system. These systems are built in capacities ranging from 500 to 20,000 lb., and may be operated either by hand or the Whiting Vari-Pressure-drive.

Lifts. Published by the Hyster Company, Portland 8, Ore. First Issue January 1949. To appear at unstated intervals. Free.

This publication contains articles relating to materials handling with various types of industrial trucks. The first issue offers an article in which efficient materials handling is said to be the answer to the present high cost of doing business. Another feature describes the use of handling equipment in the electric utilities industry. Copies are obtainable from Hyster dealers.

A Unique Management Consulting Service. 12 pages. 8½ x 11 in. Published by Management Services Department, Systems Division, Remington Rand, Inc., New York. Free.

This pamphlet describes the Remington Rand management consulting service, which "approaches the problem of functional integration of your business on a top-man-

agement level"—that is, through the board of directors or the president of the company—and aims primarily to furnish *basic procedural recommendations*." This service "functions on a strictly professional basis, free from commercial bias and in accordance with an ethical code which prohibits any favoritism as to make or type of required equipment," the booklet says. As applied to railroads, this service is available for consultation on car accounting and reporting, stores control and purchasing record systems, personnel records, way-billing, reconsignment control systems, freight claims and baggage claim systems, freight credit and collection systems, information records, interline settlements, real estate and tax records, maintenance and overhaul systems, and many others. Copies and additional information may be obtained, free, from Remington Rand management services department, 315 Fourth ave., New York 10.

FILMS

Fire Fighting with Wetter Water. 20-min., 16-mm., sound, color motion picture. Carbide & Carbon Chemicals Corp. Available for private showings to industrial groups and meetings without charge, by addressing the corporation at Room 328, 30 E. 42nd street, New York 17.

This movie illustrates how water, made wetter by the corporation's new product, "Unox," fire-fighting penetrant, knocks out fires three to four times faster than plain water. It depicts tests run throughout the country by various fire services, demonstrating the speed with which "Unox" extinguishes fires in cotton, wallboard, wooden shacks and various inflammable liquids.

At Your Service and Along the Santa Fe Trail. Available on a free-loan basis from the Atchison, Topeka & Santa Fe Film Bureau, 80 E. Jackson boulevard, Chicago 4.

The Santa Fe produced these films, which have been released for general distribution. *At Your Service* tells in 25 min. the story of modern railroad freight service and traces the history of the Santa Fe from its 18-mi. beginning to the present. *Along the Santa Fe Trail* is a 35-min. portrayal of the road's passenger services and features some of the scenic attractions along its lines.

Human Factors in Safety. A series of six 35-mm. sound slide films. National Safety Council, 20 N. Wacker drive, Chicago 6.

Offered as an aid to management in training of foremen, this series comprises a visual training course that deals with production and job attitudes as well as safety. Supervisors are shown how to train new workers, how to keep experienced workers alert, and how to win the respect, cooperation and loyal support of their men. The titles are, *The Secret of Supervision*, *Teaching Safety on the Job*, *People Are All Alike*, *Everybody's Different*, *Teamwork for Safety* and *Safety Case Histories*.

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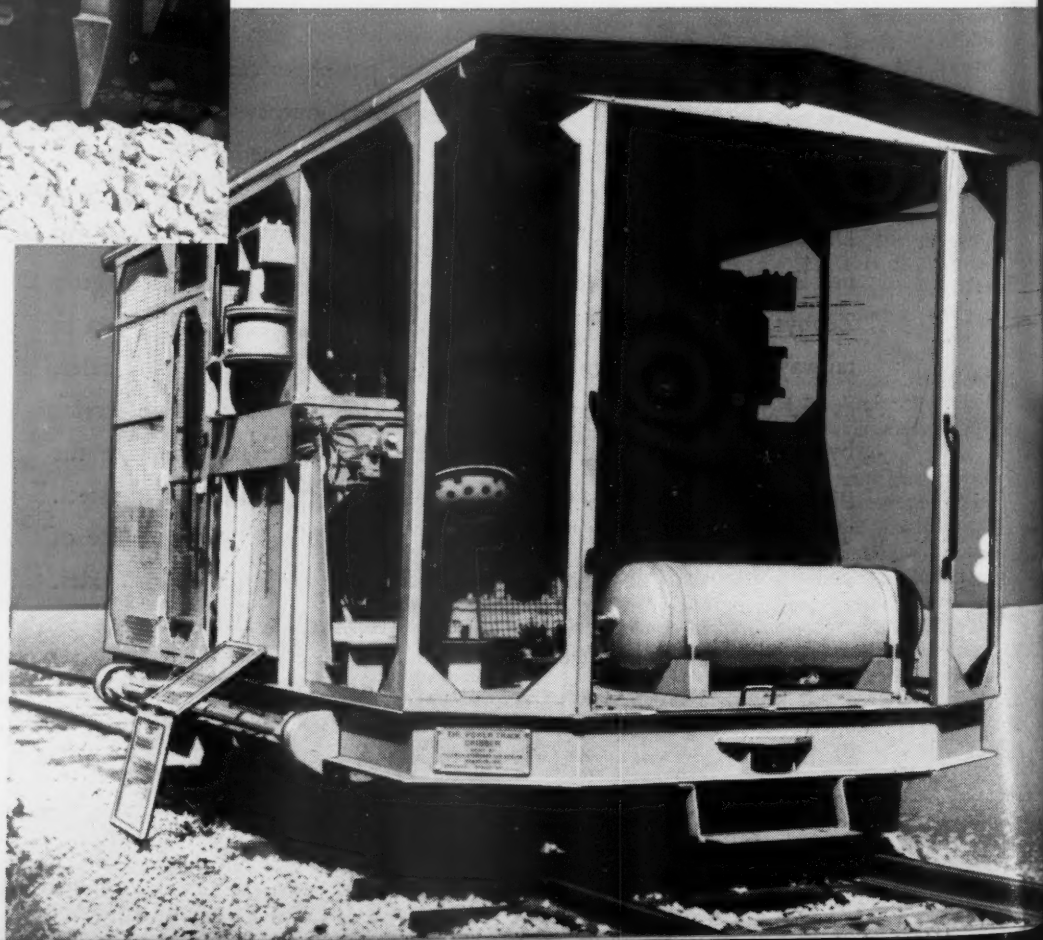


PULLMAN-STANDARD POWER TRACK CRIBBER IN POSITION ON TRACK

Close-up shows digger bars, with "impact" bars preparing the crib ahead. Diggers contact the ballast serially, moving the ballast progressively from track center to ends of crib. Depth of digging may be varied for different track conditions and heights of rail.

This revolutionary power cribber does the work of large crews with hand tools, in removing fouled and compacted ballast from between the ties preparatory to resurfacing the track. It cleans out each crib uniformly, at a rate far beyond that possible with any previous means, at any comparable cost. It operates effectively in all types of ballast, in all track conditions, day or night. Four lateral wheels permit removal from track under its own power in less than five minutes.

Write for analysis comparing cost with gang operations under varied track, ballast, and traffic conditions.



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Like the cribber, this power ballaster greatly increases the production of maintenance gangs. Its output of uniformly ballasted track is faster, better, and cheaper than that of previous methods of track improvement. Performance is uniform, regardless of track raise or ballast conditions. In one on-line experience, for example, results over an extended period showed that this machine enabled one gang (enlarged by only 50%) to *triple* its daily production, cutting maintenance costs *in half*. Other tests under all conditions have produced similar benefits. These figures also are available for your study. Write for them, today.

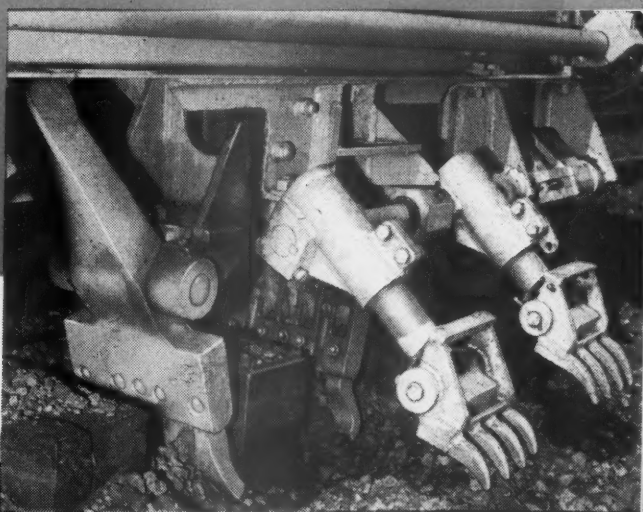
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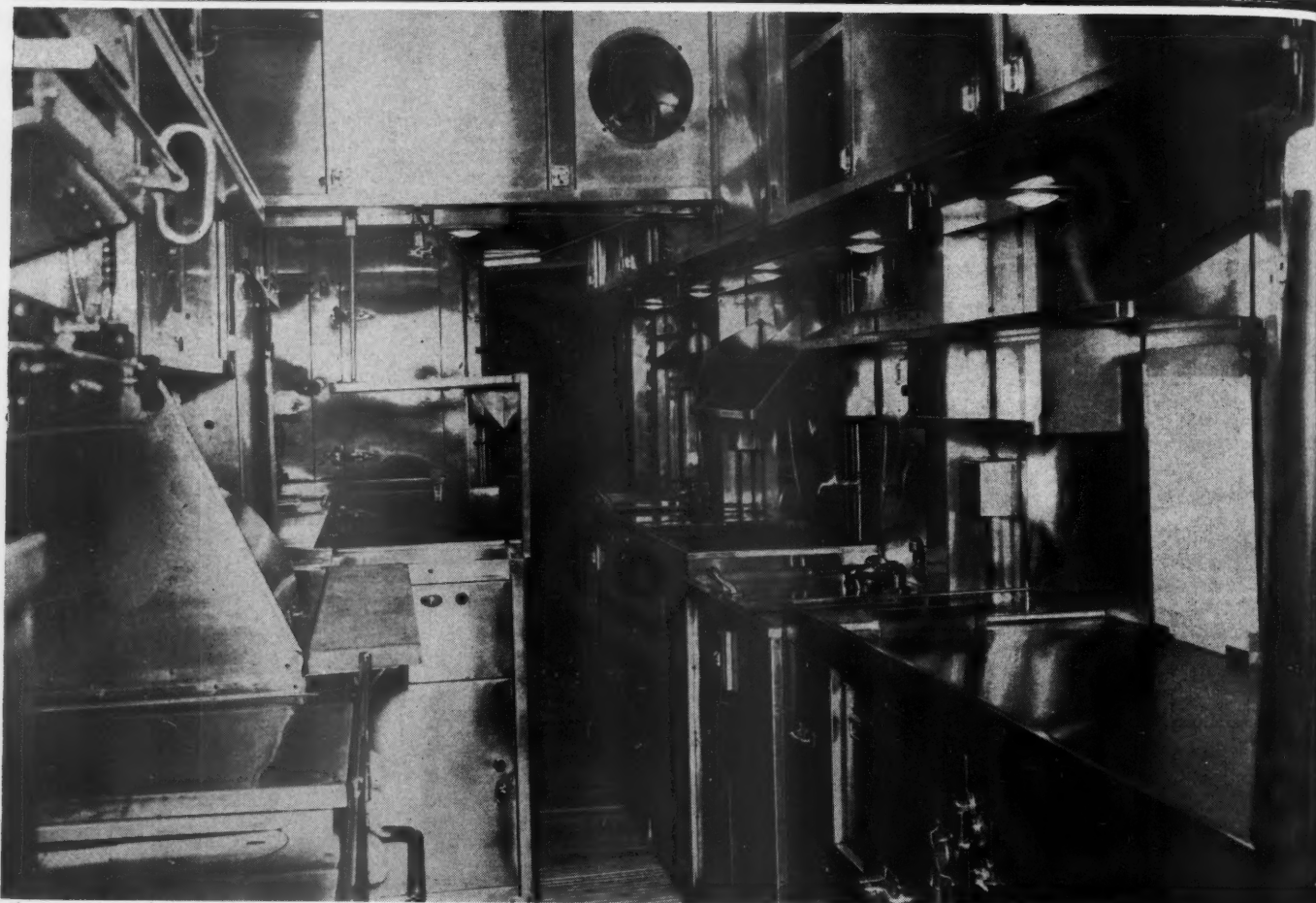


PULLMAN-STANDARD POWER BALLASTER ON TRACK

The detail view shows tamping shoes at low position along the tie base. Ballast feed shoes are in extended position; these work the loose ballast back into position between the ties. Like the cribber, this power ballaster can be removed from the track under its own power in less than five minutes.



Mealtime on the *Calífornia* goes smoothly



Photos courtesy of The Budd Company

The kitchen in all its shining cleanliness—all ready for the skilled crew for another busy day of preparing meals . . . far different from the unplanned diners of yesteryear.

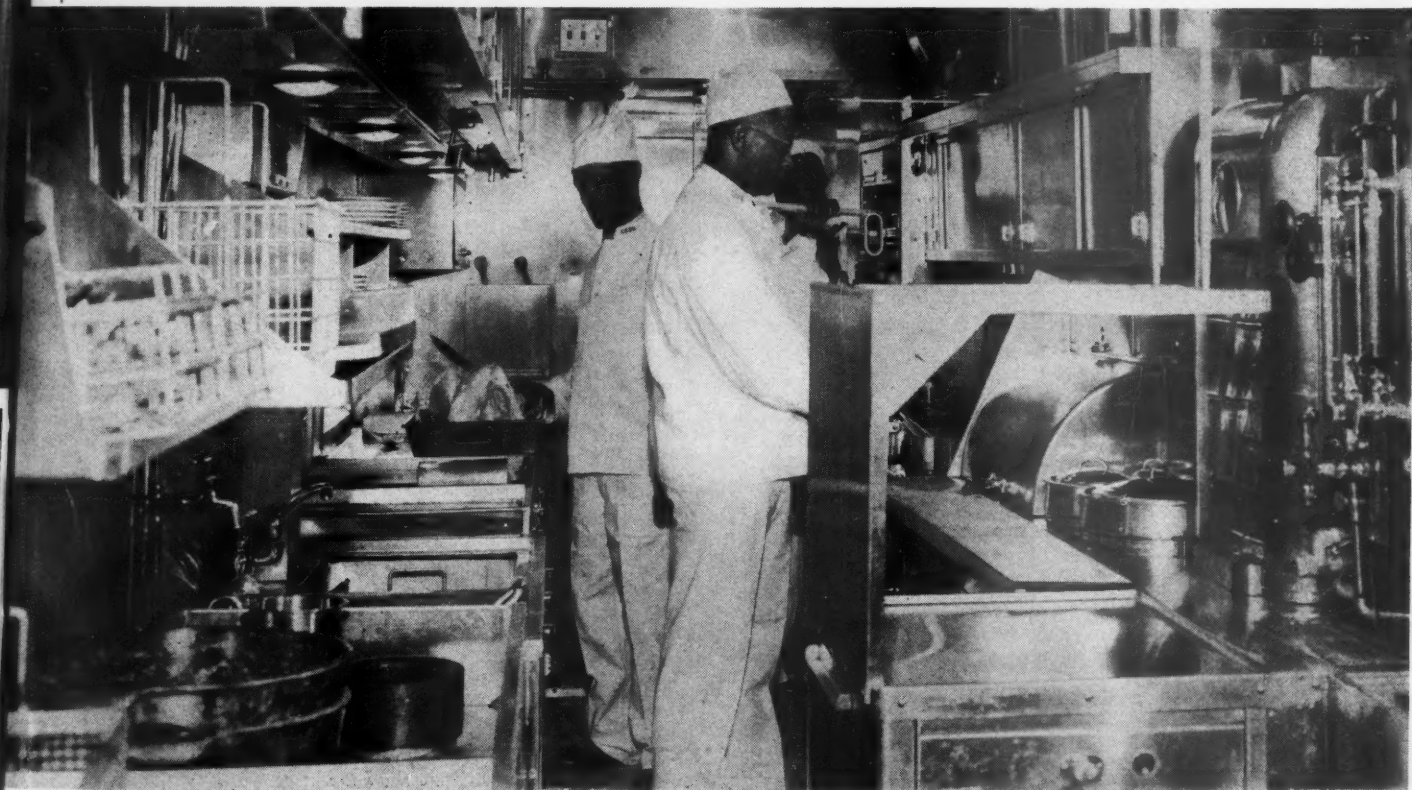
Good drinks and an appetizing snack too!—from the unique service bar in the lounge car, adds to the pleasure of traveling leisurely. (inset-right)



Zephyrs in Colonna Kitchens . . .

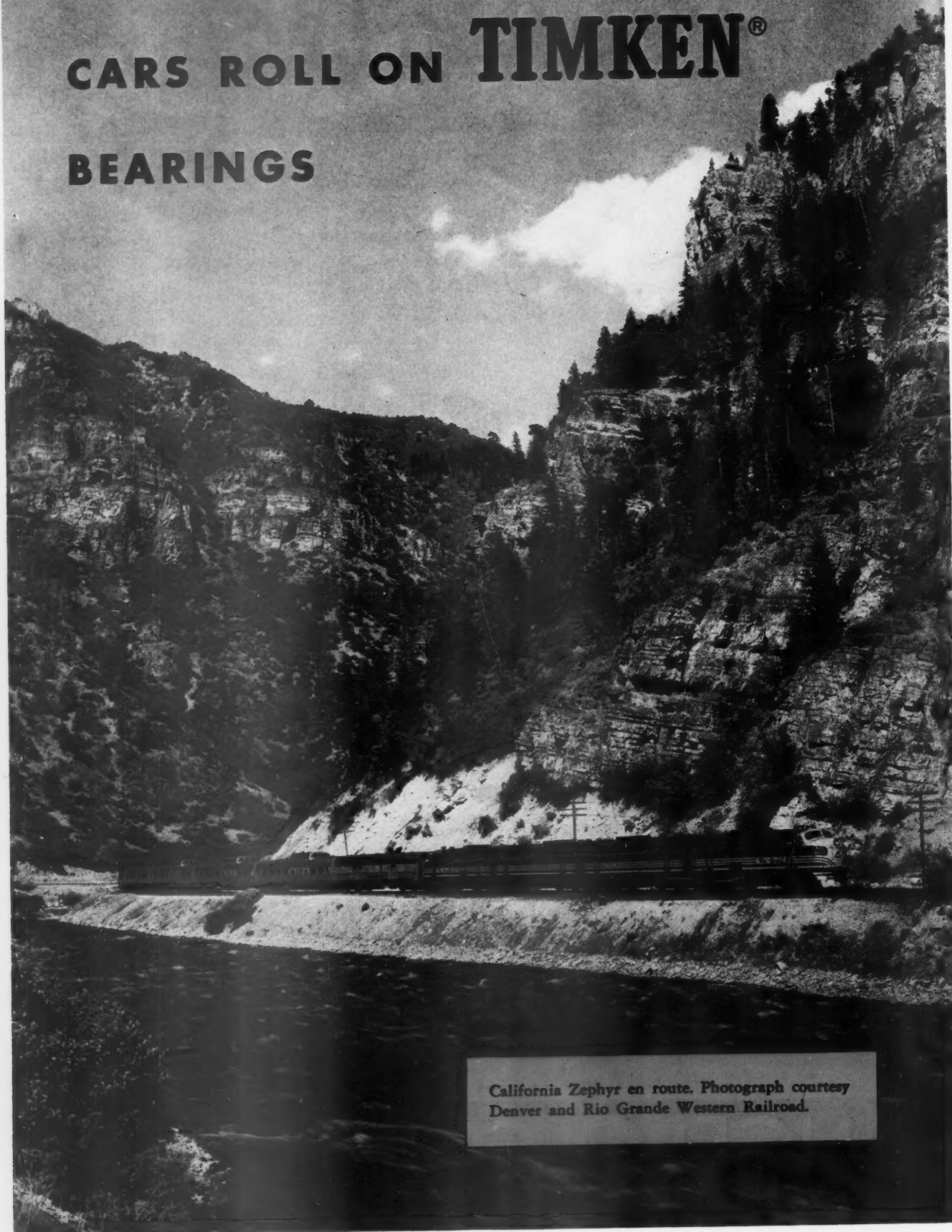
These modern, sanitary dining car kitchens seldom seen by the public—yet so important for their eating pleasure are really worth talking about. A miniature hotel kitchen with facilities to prepare anything from a tasty, toasted sandwich to a full-course meal—with all the trimmings. These compact diners are the result of careful planning between the Railroad Dining Car Departments and our engineers in designing the equipment for efficient, quick service with the most modern sanitary methods—including such items as electrically-cooled

refrigerators, gas and steam heated steam tables and coffee urns, and special spray-type dish and glass washers, meeting the regulations of the U.S. Public Health Service—to insure cleanliness for your protection. Our experience in designing and constructing the equipment for the Railroad Dining Cars has become our "industry" and this group of diners for the Chicago, Burlington and Quincy, the Denver and Rio Grande Western and the Western Pacific is representative of the progress made by us in this field.



ANGELO COLONNA
PHILADELPHIA, PA.

ALL CALIFORNIA ZEPHYR CARS ROLL ON TIMKEN® BEARINGS



California Zephyr en route. Photograph courtesy
Denver and Rio Grande Western Railroad.

"ZEPHYR"

A BREEZE THAT NEVER STOPS BLOWING 1934 - 1949

Since 1934, the name "Zephyr" has been famous for speed and comfort in railroad passenger transportation. Today the California Zephyr, latest member of the Zephyr fleet, is poised to carry on the great traditions established by its illustrious predecessors — all still in service.

By removing all speed restrictions as far as bearings are concerned; eliminating

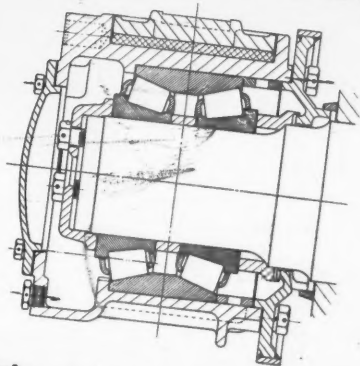
hot boxes; and promoting almost incredible smoothness of operation, Timken tapered roller bearings have been important factors in the spectacular success of the Zephyr streamliners during the last 15 years. That is why all 67 Budd-built cars comprising the 6 trains making up the new California Zephyr service are equipped with Timken bearings.

Jointly sponsored by the Chicago, Burlington and Quincy; Denver & Rio Grande Western; and Western Pacific railroads, the California Zephyr serves a new transportation need between Chicago and the west coast. Embodying new conceptions of speed and luxury, its success is assured.



One of the new Vista Dome cars built by the Budd Company for the California Zephyr. In luxury of appointments and conveniences, as well as in structural and mechanical excellence, these cars typify the latest and best in American railroad development—and therefore in the world.

**THE TIMKEN ROLLER BEARING
COMPANY, CANTON 6, OHIO**
CABLE ADDRESS "TIMROSCO"

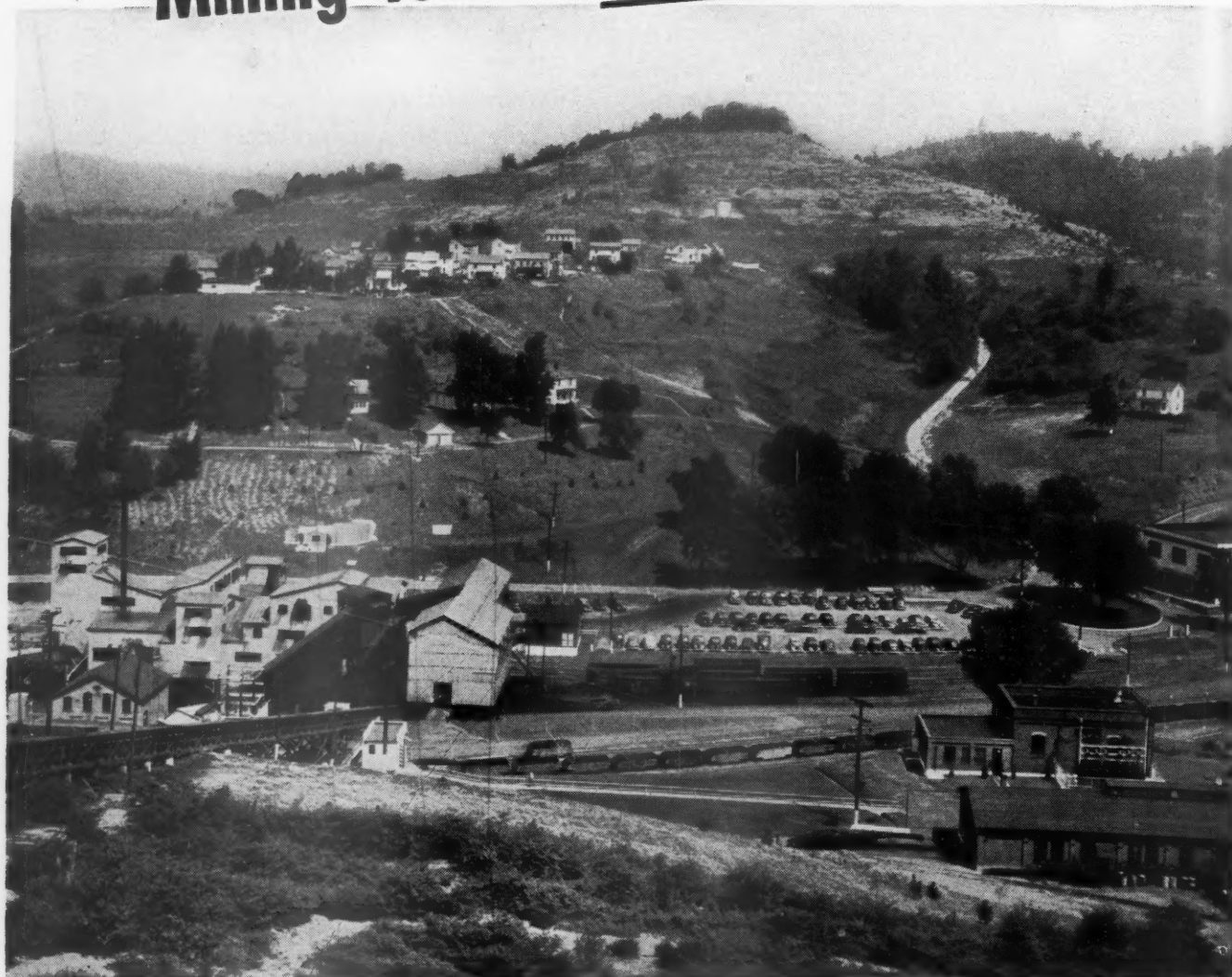


**Timken Roller Bearing Mounting
As Used Under
The California Zephyr Cars**

This design has been thoroughly time-tested and proved by millions of miles of service in high-speed passenger train operation.

NOT JUST A BALL  NOT JUST A ROLLER  THE TIMKEN TAPERED ROLLER  BEARING TAKES RADIAL  AND THRUST  LOADS OR ANY COMBINATION 

Mining Town — MODERN STYLE



This pleasant community is a good example of how living as well as working conditions of miners have changed with the development of modern, mechanized mines.

Take the attractive homes in this picture, for instance. While they're nestled high in the scenic hills above the mine mouth and modern preparation plant, obviously there aren't enough of them to house all the mining families required by this big coal operation. But note the centrally located parking lot near the tippie with its many miner-owned cars in which the men have driven to work. For with new, improved roads that make even this rugged country more easily accessible, miners no longer need to live right next to the coal mine. Today, about two-thirds—over 260,000—of the nation's bituminous coal miners either *rent from private landlords or own their own homes*, and home ownership among miners generally continues on the increase.

Modern mining practices are a far cry from those of "pick and shovel" days. Today mines are "blueprinted" far in advance of construction. Backed by facts learned from geological surveys, mining engineers can accurately plan mine construction, without running into costly alterations due to otherwise unexpected faults in rock and coal seam formations.

Such production planning underground permits speedy handling of coal from seam to surface for washing, grading, and combining in "continuous flow" preparation plants. The result is mass production of many grades of coal, each giving maximum heat per ton in modern industrial and home heating plants.

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A Strong, Light, Rugged
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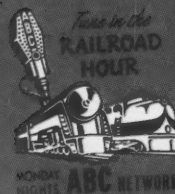
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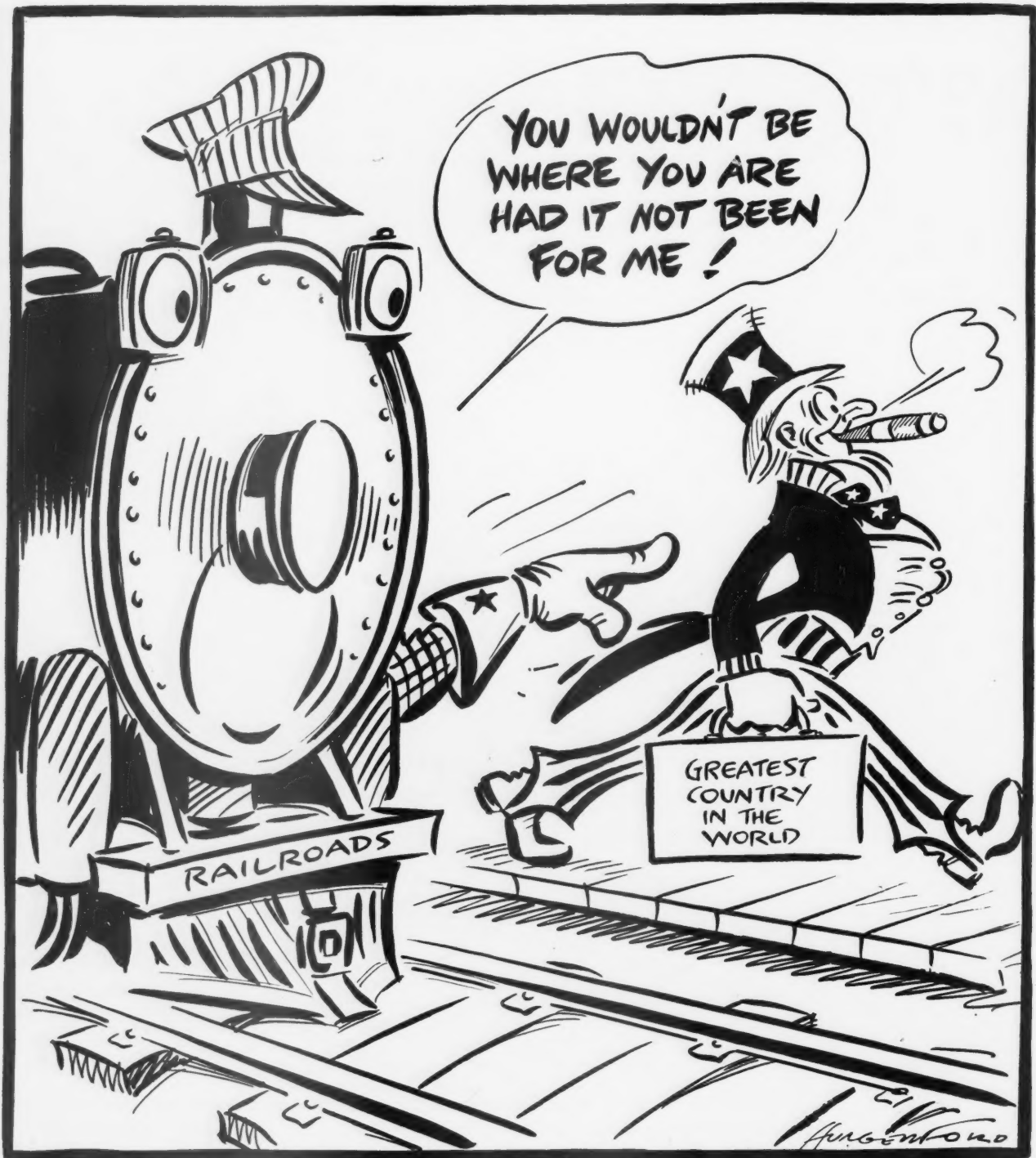


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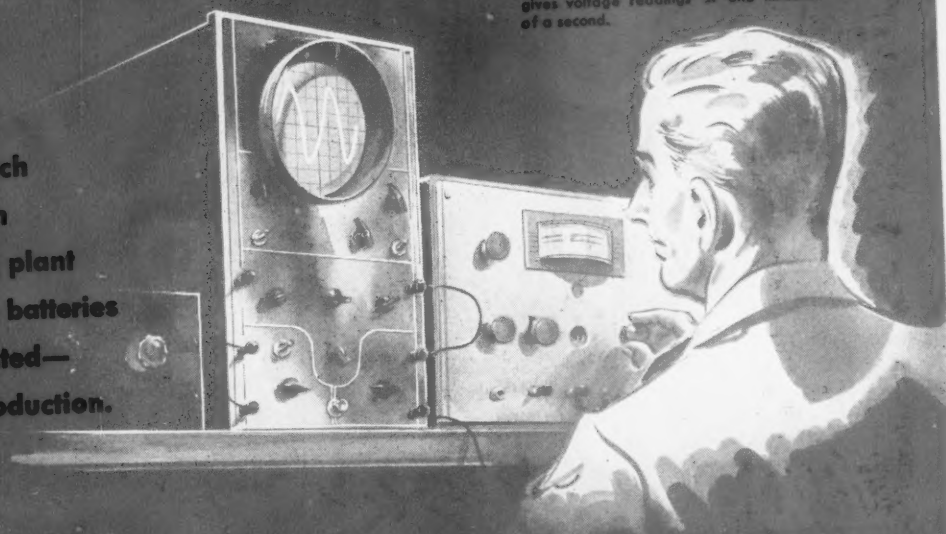
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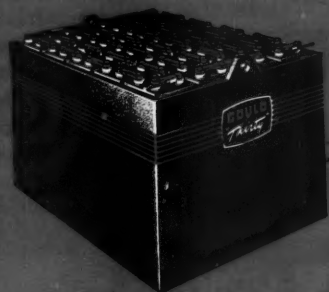


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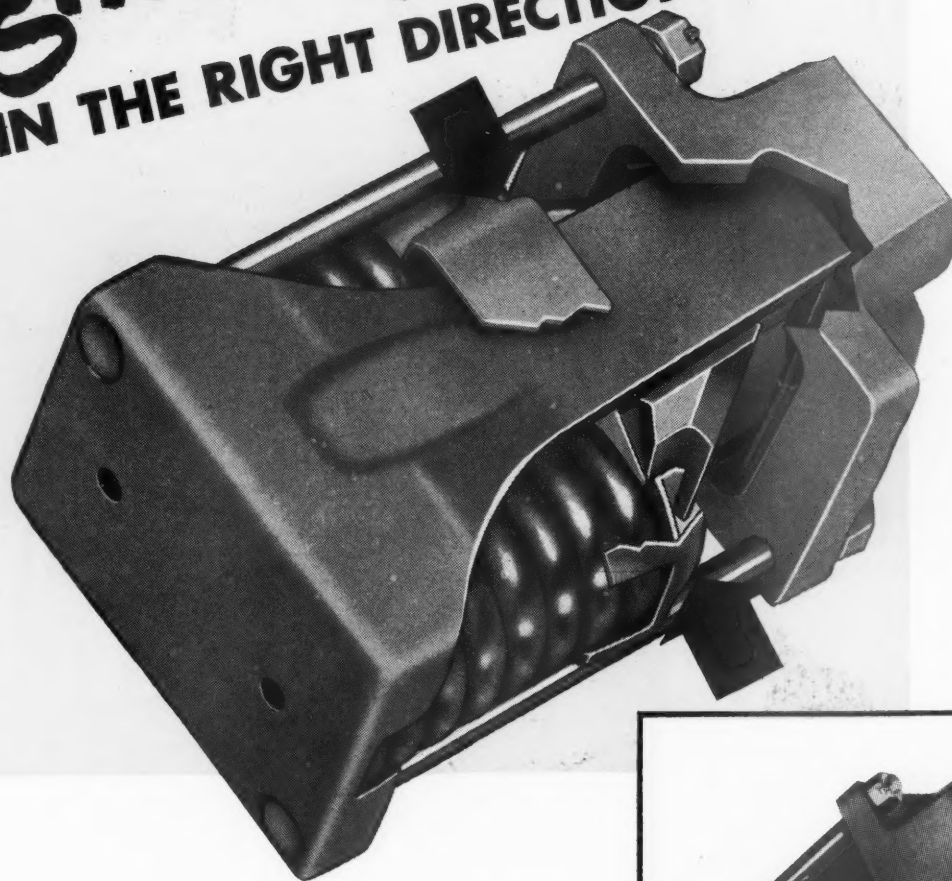
Calobar Lenses. When above operations also involve danger from glare, heat, ultra-violet and infra-red radiations, Calobar lenses should be worn. Also recommended for welders' helpers (under helmet), workers near welding work, railroad men, truck drivers and helpers, bus drivers and others needing protection from wind, dust, cinders, flying particles and glare.

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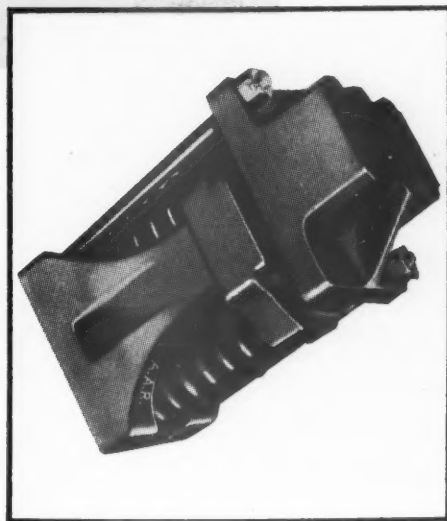
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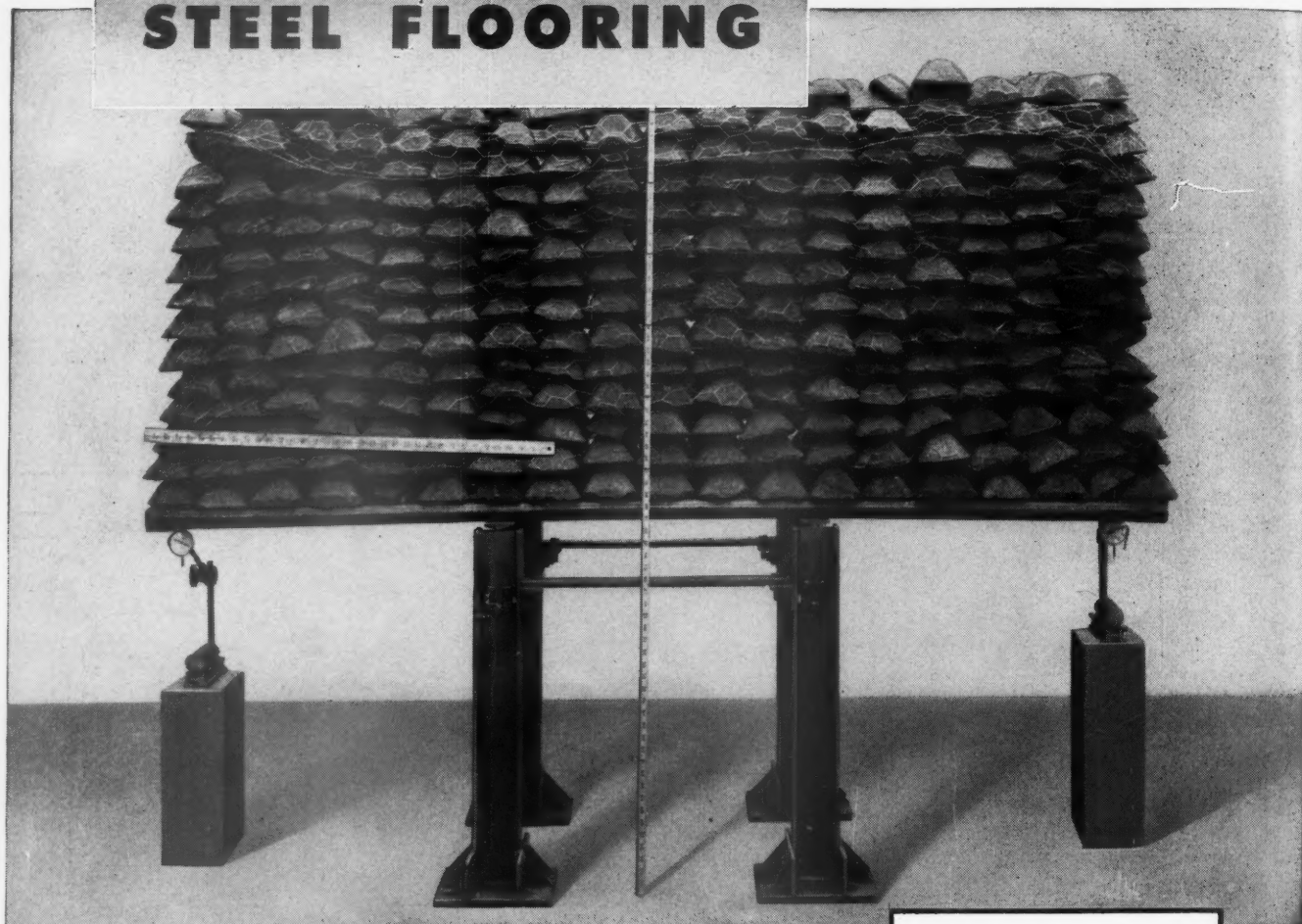
1868

STOP DANGEROUS AND COSTLY BOXCAR FLOOR BREAK-THROUGH

WITH

NAILABLE STEEL FLOORING

In Detroit Testing Laboratory test to determine cantilever strength, 11,000 lbs. of pig iron were loaded on a panel consisting of three NAILABLE STEEL FLOORING boxcar channels welded side by side. The cantilever span was 30". Under this floor load of 733 pounds per square foot—far in excess of heaviest freight loading—the NAILABLE STEEL FLOORING section *hadn't even reached the yield point.*



In actual use as well as in laboratory tests it has been proved that NAILABLE STEEL FLOORING can't break through under any kind of heavy freight. Boxcars with NAILABLE STEEL FLOORING have safely hauled heavy copper cakes, automobile engines, highly concentrated loads of sheet steel and tinplate as well as hundreds of other commodities.

No Fork Truck Break-Throughs Either

NAILABLE STEEL FLOORING supports the biggest fork trucks, too, which so often break through conventional floors. For example, 23 cars are spotted each day at the Wabash Railroad's Ford Loading Dock in Detroit. Although they're all new or recently rebuilt, an average of five or six cars per day come in with large holes somewhere

throughout the length of the floor where fork trucks have broken through.

Durability Means Low Maintenance . . . Low Operating Costs

NAILABLE STEEL FLOORING stops the break-throughs—and a good many other common floor troubles. It isn't chewed up by pinch bars or rough freight. Although nails are tightly clinched, they don't tear, splinter or deform the floor. All this adds up to lower maintenance costs—and lower operating costs as well. When floors stay in good condition for all types of freight, cars require less switching and empty movement.

To eliminate dangerous break-throughs and reduce maintenance costs, specify NAILABLE STEEL FLOORING for the next boxcars you build or rebuild.

"Many delays and potential accidents have occurred and are continuing to occur, due to pig iron, lead, copper bars and similar commodities breaking through boxcar floors . . . this condition . . . is due to the type of equipment selected for this type of loading." (Car Department Officers Association Report by Committee on Preparation of Freight Cars, September 20, 1948)

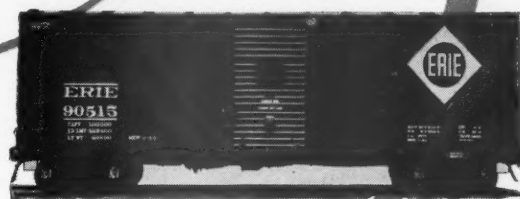
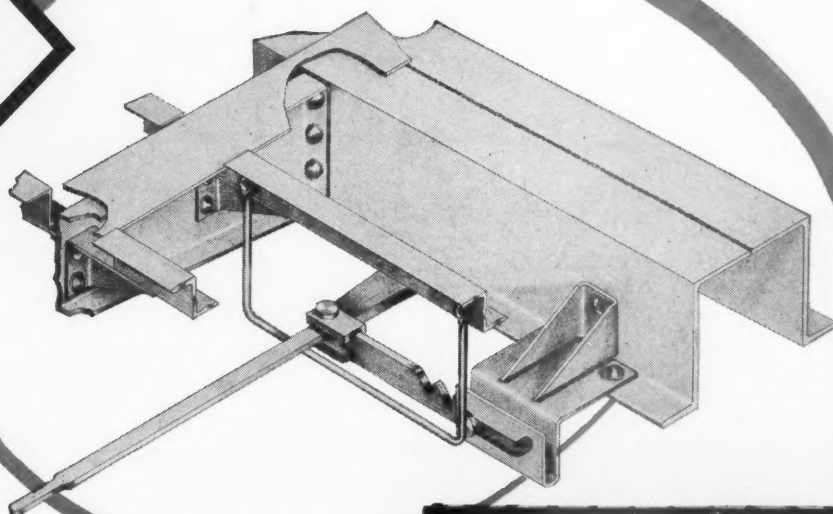
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Baltimore & Ohio R.R.
Delaware and Hudson R.R.
Interstate Railroad Co.
Southern Railway System
General Chemical Division
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& Western R.R.
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& Atlantic R.R.
Essex & Lake Superior R.R.
Nashville, Chattanooga
& St. Louis R.R.
St. Louis-San Francisco R.R.
Shippers' Car Line Corp.
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Seven hundred new Erie 50-ton steel boxcars, built by the American Car and Foundry, are being equipped with AMWELD Brake Slack Adjusters, Type B-2, as illustrated.

More and more railroads are recognizing the many advantages that accrue from using AMWELD Brake Slack Adjusters.

Three models, "T", "B" and "C" are adaptable and easily installed on all types of freight cars.

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Brake Slack Adjusters will bring complete data
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ALTHOUGH unseen in the finished car, Railway Insulmat's efficiency saves railroads thousands of dollars every year and adds much to the riding comfort of passengers.

Used by leading railroads for freight, passenger and refrigerator cars and for cabooses. In box cars, it is used as a ceiling finish in place of plywood—it's better—costs less—lasts the life of the car.

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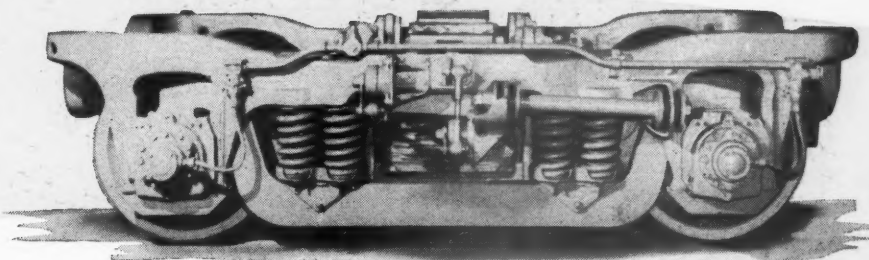
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COMMONWEALTH TRUCKS



Commonwealth Truck equipped with bolster roll stabilizer.

The six new, luxurious streamliners, named "California Zephyrs", operated jointly between Chicago and California by the *Burlington, Denver & Rio Grande Western* and *Western Pacific*, embody the latest in modern passenger train design, including the unusual Vista-Dome cars.

These passenger cars ride on COMMONWEALTH 4-wheel trucks equipped with bolster roll stabilizers that provide positive mechanical control of car body roll.

This modern truck with COMMONWEALTH one-piece alloy cast steel truck frame and bolster provides great strength and durability with light weight and assures longer service life with minimum maintenance expense.

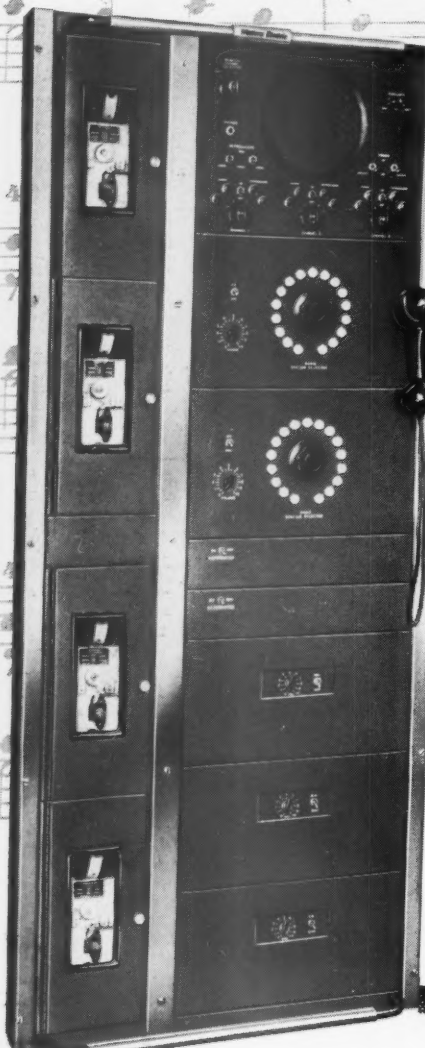
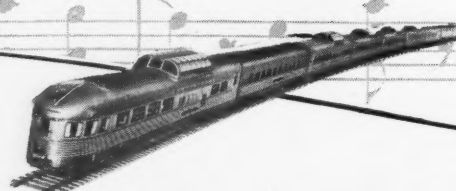
Superior riding qualities, with greater passenger comfort and safety, are other important advantages of world-famous COMMONWEALTH passenger car TRUCKS.



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...and music while they ride!

Passengers on Burlington's California Zephyrs and Twin Cities Zephyrs and on Kansas City Southern's Southern Belles enjoy train-wide advantages of Western Electric Railroad Program Distribution Equipment provided by GRAYBAR

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Graybar is ready to assist in your railroad's program distribution equipment plans—and to provide most of your requirements for lighting, pole lines, communication, wiring, repair-shop electrical apparatus and tools.

Our local office will give you intelligent, prompt, courteous service. *Graybar Electric Company, Inc.*
Executive Offices: *Graybar Building, New York 17.*

4926

For each of the ten trains, Graybar has provided the Western Electric equipment panels plus all accessory equipment, such as antennas and lead-ins, the high-quality Western Electric 728B and 755A loudspeakers with transformers, selector switches, volume controls, and all associated wiring.

Like that on the *Zephyrs*, the Western Electric 100 type Program Distribution System Panel shown above is a three-channel, high-level sound system with five input sources, specifically designed for use on deluxe railroad trains. Up to 300 speakers may be operated with the system at a pleasing

volume. The five input sources are two pairs of magnetic wire reproducers, two radio receivers, and announcing handsets.

The loudspeakers and selector switches are located throughout the train so that any one of three programs may be selected in any open section or private space.


The Western Electric 109 type Program Distribution System Panel shown at the right, like that on the *Southern Belles*, is a single-channel, high-level system with three input sources: radio, wire reproducer, and announcing microphone. Train-wide distribution and program control are provided "to order".



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100,000 ELECTRICAL ITEMS ARE DISTRIBUTED
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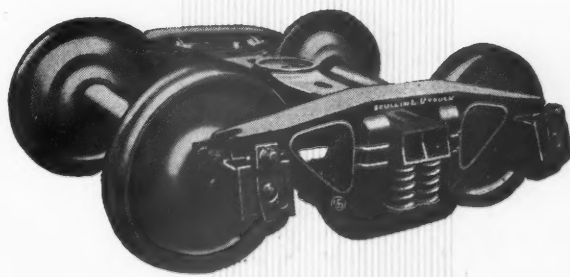
SCULLIN L-V TRUCKS protect your journal bearings, too

...AS WELL AS LADING, CARS AND TRACK

Actual service tests have proved that the lateral cushioning effect of the L-V Truck practically eliminates wear on the end surfaces of standard AAR journal bearings.

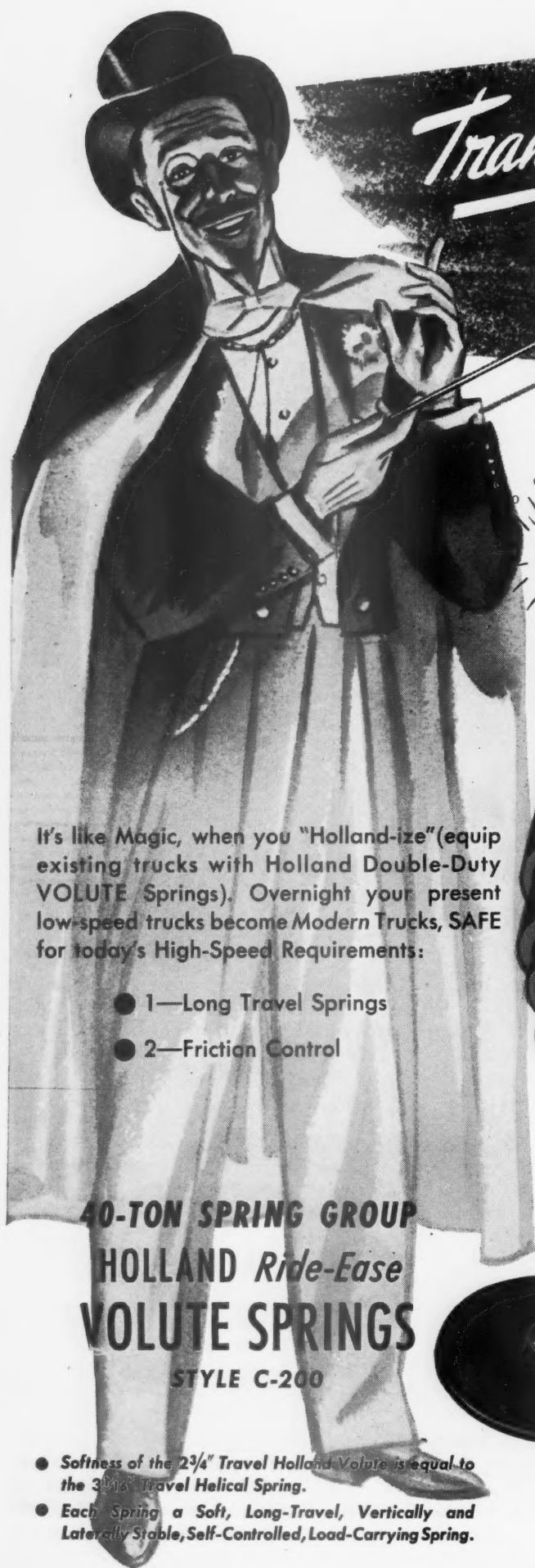
Since bearings are usually condemned because of worn ends long before their maximum crown wear has been utilized, this means substantial savings in replacement costs.

Roller bearings can also be applied if desired. Either way, you can depend on L-V Trucks to make fast freight safe for lading, cars and track ...with practically no maintenance!



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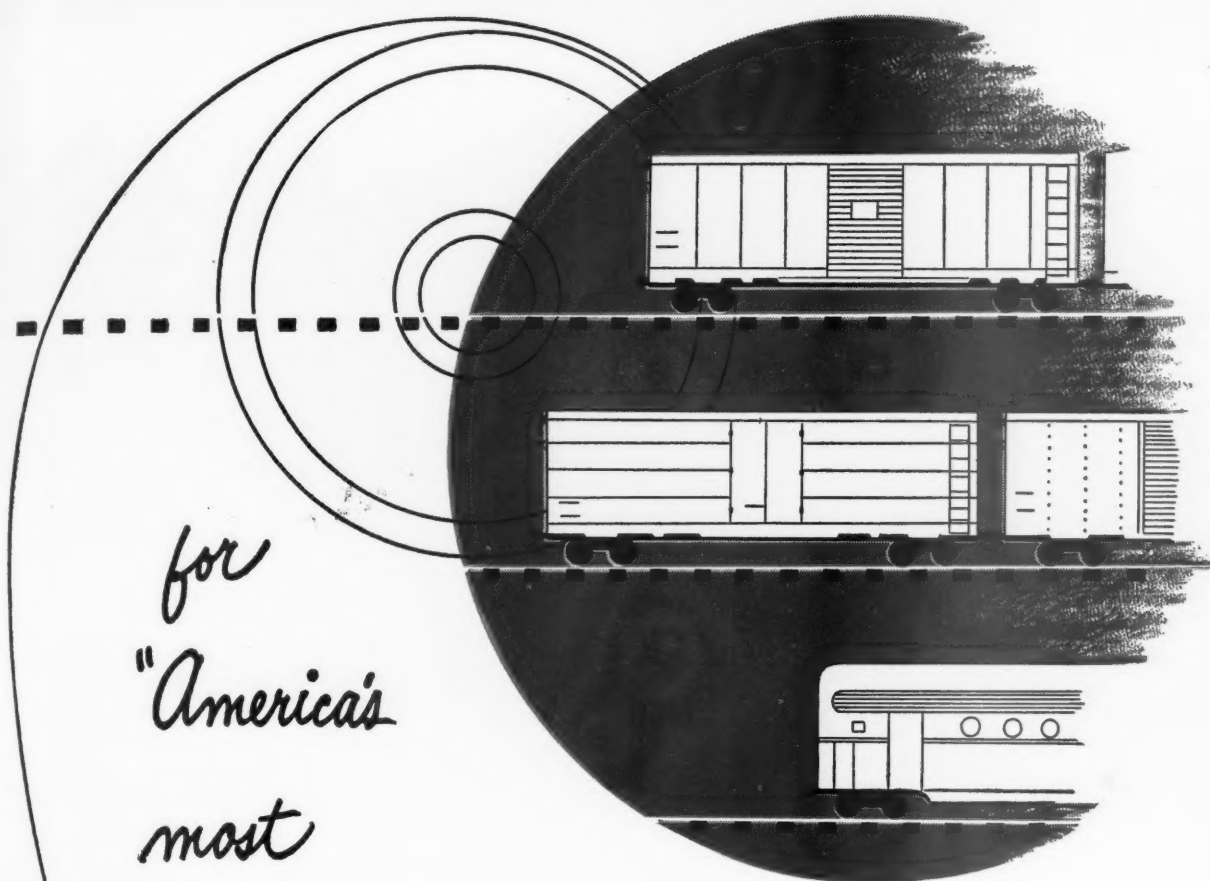
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HOLLAND *Ride-Ease*
VOLUTE SPRINGS**

STYLE C-200

- Softness of the 23/4" Travel Holland Volute is equal to the 3 1/8" Travel Helical Spring.
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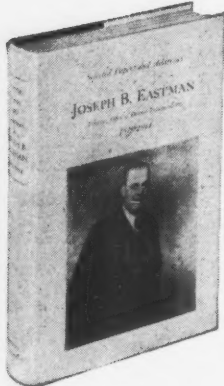
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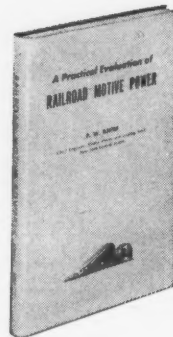
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By P. W. Kiefer

Chief Engineer, Motive Power
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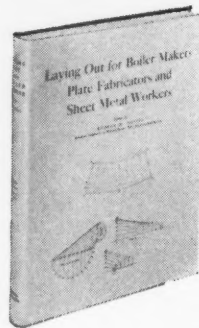
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Assistant Engineer of Motive
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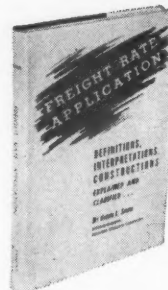
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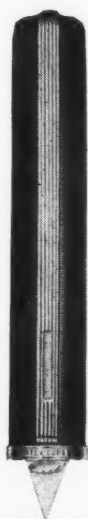
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Burlington, Rio Grande, and Western Pacific designers specified DIXIE for the new *California Zephyrs*.

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Minimizes Maintenance Costs

The better the brakes the fewer the breaks.

That fragile merchandise in the cars behind—will it arrive at destination undamaged, or will there be claims to settle? The answer lies partly in what happens during brake applications. If deceleration is smooth . . . as it is with NYCO "AB" Brakes . . . there is less chance for damage, not only to lading, but to car components as well. So brake modernization is an investment that pays two-way dividends, especially if it is New York "AB" Brake Equipment.



The New York Air Brake Company

420 Lexington Ave., New York 17, N.Y.

Plant: Watertown, N.Y.

Standard

**HAS A 50-YEAR
HEAD START—
AND...**



● ● **WE KEEP THAT ADVANTAGE EVERY TIME WE RE-DESIGN!**

As the Railroads continue to decrease maximum structural weights and increase strength requirements, it is becoming increasingly evident that only "Standard" Diagonal Panel Roofs and Improved Dreadnaught Ends will satisfy specifications.

TANDARD RAILWAY EQUIPMENT MANUFACTURING COMPANY

The World's Largest Fabricator of Railway Car Specialties

310 SOUTH MICHIGAN AVENUE, CHICAGO 4 • 247 PARK AVENUE, NEW YORK 17



Budd chose RAILWAY AGE



**The Story of a
28 Page Insert . . .**

Largest insert ever to appear in the railway industry highlights 15 years of consistent Budd advertising in *Railway Age*

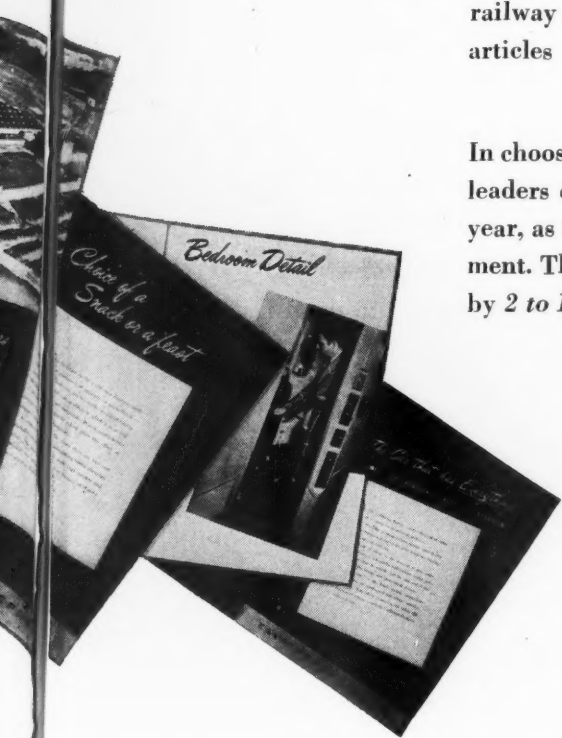
Here's Why

The Budd Company of Philadelphia and its advertising agency, Lewis & Gilman, planned and carried out this striking advertising feature to dramatize a vital story to railway executives . . . (1) to explain the construction of the new Budd-built California Zephyrs, the very latest in streamlined passenger trains, and (2) to emphasize the vast technical resources that lie behind all of Budd's pioneering achievements.

After careful consideration, it was decided to put this story over in a 28-page insert. *Railway Age* was chosen to carry this, the most outstanding multiple-page advertisement ever featured in the railway industry.

Here is another case story which illustrates the leadership of *Railway Age* . . . leadership based on its prestige and influence throughout the railway industry . . . on its more than 32,000 railway readers of *paid*-subscription copies . . . and its distinctive editorial service which is not even remotely approached by any other publication. In 1948, *Railway Age's* 27-man editorial staff of railway specialists published nearly 2500 pages of *well-balanced* editorial articles and news to keep the entire industry informed.

In choosing *Railway Age*, the Budd Company concurred with nearly 400 other leaders of the railway equipment industry who pick *Railway Age*, year after year, as the publication to put their story across regularly to railway management. That's why *Railway Age* leads its field in number of advertising pages—by 2 to 1.



RAILWAY AGE



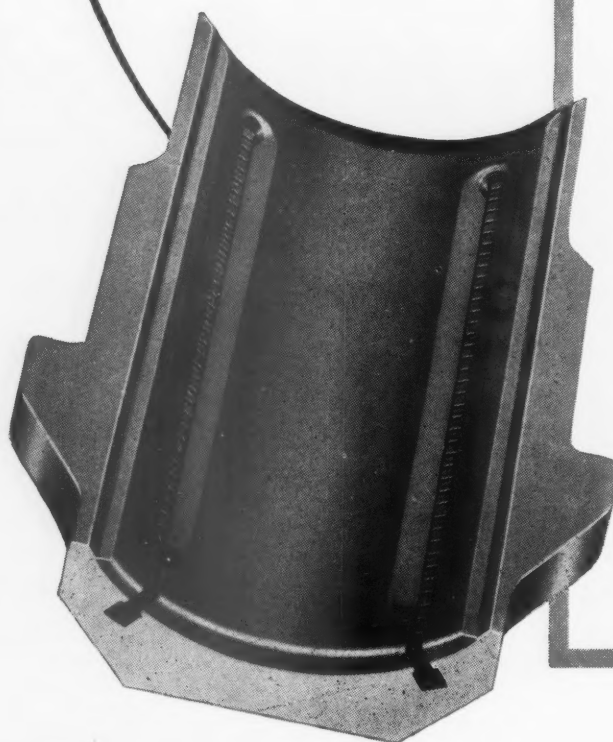
A SIMMONS-BOARDMAN PUBLICATION



Modern MAGNUS BEARINGS *Improved*

"MAGSAFE" Satco-Lined JOURNAL BEARING

**Stops Lint-Wipers
and Waste-Grabs**



The "Magsafe" Satco-Lined Car Journal Bearing complies with standard A.A.R. design and dimensions, but is equipped with "T" section brass "combs" to prevent lint-wipers and waste-grabs.

These combs are loosely held so that they rest on the journal and follow closely its every up-and-down movement.

Further advantages of the comb arrangement are uniform lubrication along the journal, and oil retention in the bearing, which is available the instant the car starts to move.



**MODERN
HEAVY DUTY
BEARINGS**

MAGNUS METAL CORPORATION
CHICAGO NEW YORK

Featured Attractions

on **FAMOUS TRAINS** ...



NP

Automatic

End door operators... Now on the CALIFORNIA ZEPHYR

• Famous trains feature NP Automatic End Door Operators because railroad officials are quick to appreciate the advantages of this modern method of door control. Passengers appreciate the convenience of doors that open safely and surely at the lightest touch, then close gently behind them. Operating and maintenance personnel approve the sturdy simplicity of the compact door-operating mechanism . . . and its

reliable, trouble-free performance.

NP Automatic End Door Operators are adaptable to new or remodeled coaches, with swinging or sliding doors. Their operating cycle can be pre-set to meet various timing requirements. And they are backed by the complete manufacturing and service facilities of the National Pneumatic Company, for nearly fifty years the outstanding leader in door control equipment.

For complete information, let us send you Publication No. 1063.

NATIONAL PNEUMATIC COMPANY

Graybar Bldg., New York • McCormick Bldg. Chicago • Rahway, New Jersey
Represented in Canada by Railway & Power Engineering Corp., Ltd., Toronto

WORLD'S LARGEST MANUFACTURER OF DOOR CONTROL EQUIPMENT

Is every-
BODY
happy?



SALLY
FORTH



TILLY
TUBBS



MORT
TICIAN



MYRTLE
GYRDLE



HORACE
HALLTREE



CHUCK
WAGON



BESS
BETT

They Are In CALIFORNIA ZEPHYRS

Equipped with

KARPEN

COMFORT-DIMENSION SEATING

Engineered for
Every Body's comfort
—Karpen seating has
been designed so that
seats, backs and arm rests
give a more relaxing, more pleas-
ant trip. Consider the sizes and shapes
of the people who ride your vehicles
— there are no two alike —
and that's the reason transportation man-
agement looks to Karpen engineering for
Comfort-Dimension seating!



4081—5

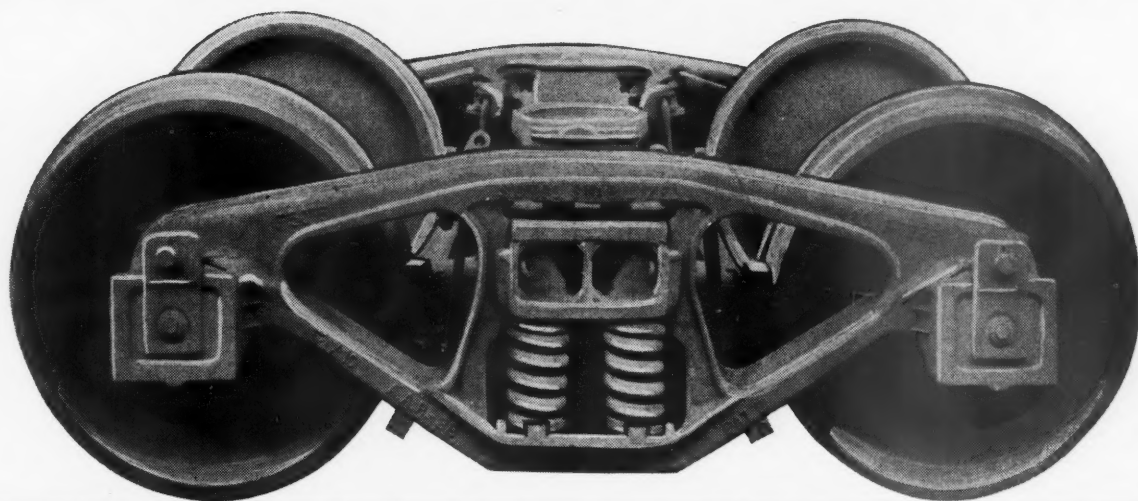
S. KARPEN & BROS.

TRANSPORTATION SEATING
624 S. MICHIGAN AVE., CHICAGO · ONE PARK AVE., N. Y.

George B. Cross Company

EXCLUSIVE SALES AGENTS

KARPEN SEATING . . . POINT OF CONTACT BETWEEN THE RAILROAD AND ITS PASSENGERS



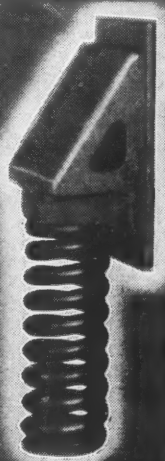
Smooth RIDING

**for all
loadings
and
speeds**

Because equally well adapted
for *Long or Short Travel Springs*, the
Barber Variable Friction Stabilized Trucks can
be designed to assure outstanding service
under any load and speed
conditions to which the equipment
will be subjected.

This **unusual** adaptability is
based upon the simple and practical
Barber Stabilizing Principle, making it possible
to design the correct damping for any
type of spring group.

- 1** Special Alloy-Iron friction casting having 35 square inches of friction-bearing surface.
- 2** Spring-steel wear plate securely bolted or welded to the column.
- 3** Friction-casting-supporting slide-spring having a minimum 3/4" initial compression.



Barber Variable Friction Stabilized Trucks

STANDARD CAR TRUCK COMPANY

332 SOUTH MICHIGAN AVENUE, CHICAGO, ILLINOIS



UPSTAIRS in the "Zephyr" Vista-Dome. Goodall Fabrics lend superlative comfort and smart good looks to luxury seating.

**UPSTAIRS...
DOWNSTAIRS** ... you'll see beautiful
GOODALL FABRICS everywhere
on the Vista-Dome "California Zephyrs"

**NEW LUXURY TRAINS BY BUDD FOR THE
BURLINGTON, RIO GRANDE & WESTERN PACIFIC**

Goodall... America's first manufacturer of specialized fabrics for transportation needs... is the natural choice for today's most beautiful trains. Their "travel-tested" textures assure the utmost comfort, luxury and beauty plus *stamina*. Goodall Fabrics are scientifically blended to give long wear with minimum maintenance. They resist soil and clean with ease... stay fresh, new-looking through millions of travel-miles.



COACH SEATS have all the handsome appearance and comfort of lounge cars. Coordinated upholstery colors throughout the train add to the luxuriousness of each car... Goodall Fabrics offer the *right* combination of texture, color and stamina.



DOWNSTAIRS in the "Zephyr" Vista-Dome coach. Goodall Fabrics make each reclining chair a model of comfort. Cushion-soft fabric textures like these make traveling a pleasure.



©1949, Goodall-Sanford, Inc.

GOODALL FABRICS, INC. NEW YORK • BOSTON • CHICAGO • DETROIT • SAN FRANCISCO • LOS ANGELES

Sole Makers of World-Famous **PALM BEACH**® Cloth and Suits

*Registered Trade Mark

Riding the wind to the West



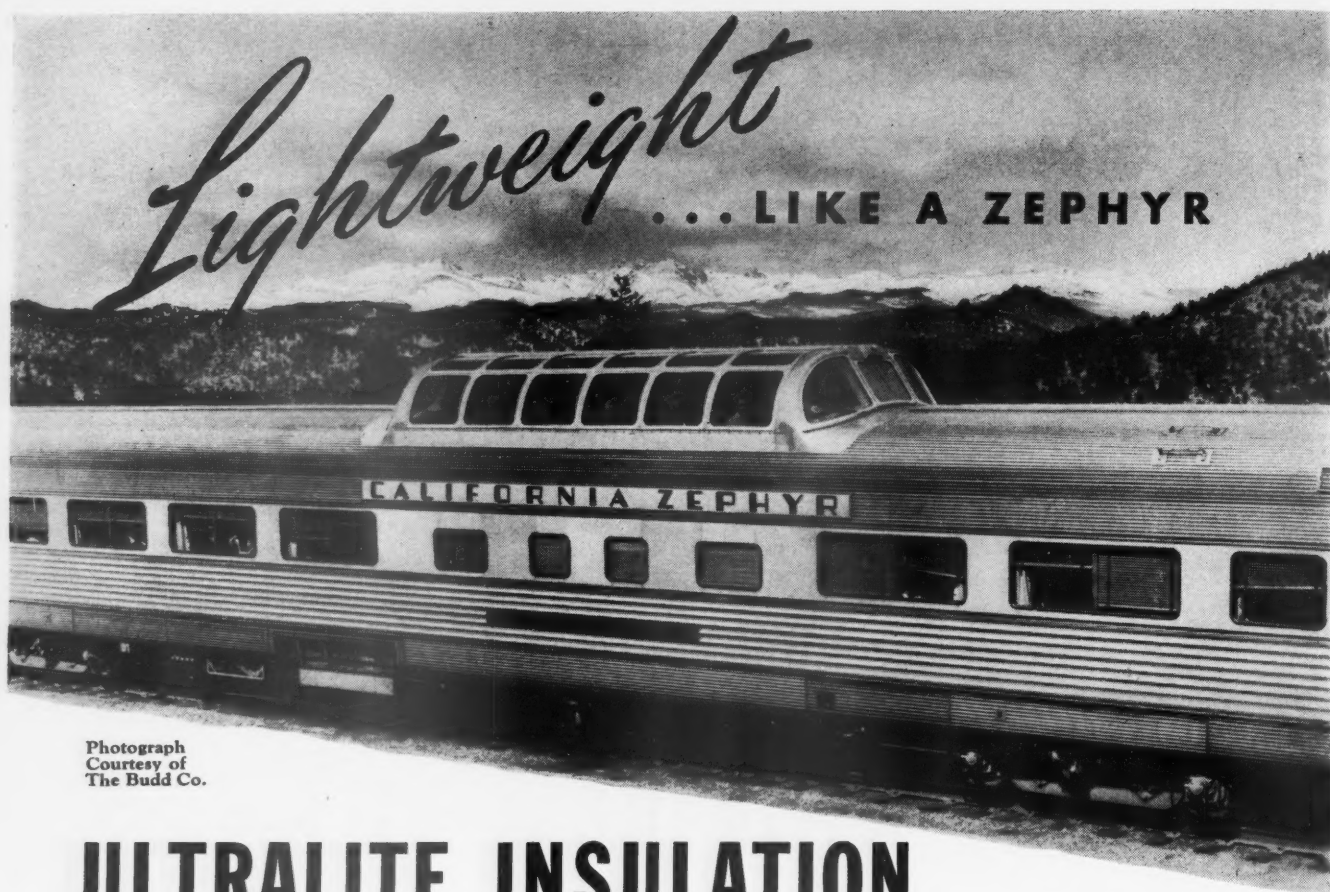
Built throughout of the finest, the new California Zephyr is, of course, Twin Cushion equipped to provide the utmost in restful riding comfort.*

WAUGH EQUIPMENT COMPANY

New York • Chicago • St. Louis • San Francisco

Canadian Waugh Equipment Company: Montreal

*REGISTERED TRADE MARK



Photograph
Courtesy of
The Budd Co.

ULTRALITE INSULATION

... another practical feature of the California Zephyr

Notable in the careful planning and development of the sleek new California Zephyr is the G-B Ultralite Insulation. The exceptional weight savings this modern insulation accomplishes is only one of its many features, however.

G-B Ultralite was low cost to install in the California Zephyr cars. It will never sag, pack or shake down. It's fire-proof, vermin, odor and moisture resistant. For all of the many miles ahead of the California Zephyr cars—G-B ULTRALITE will serve with highest efficiency —and without maintenance.



GUSTIN-BACON MANUFACTURING CO.
KANSAS CITY 7, MISSOURI

New York • Philadelphia • Chicago • Tulsa • Houston • Fort Worth • San Francisco

CALIFORNIA ZEPHYR

THE BUDD COMPANY

PHILADELPHIA 32 PA.

March 20, 1949

Chicago, Burlington & Quincy Railroad Company
The Denver and Rio Grande Western Railroad Company
The Western Pacific Railroad Company
Gentlemen:

No matter how many trains we may build in the future, and we hope a number of them will be for you, the California Zephyrs will always be one of the high points in our career as railway car builders.

The reason is that we feel these trains are establishing a new way of life in railroad travel. Never has the vehicle itself made travel so definitely an end in the search for pleasure. It is as though there were no need for a destination.

It is singularly appropriate that these trains, each with five Vista-Dome cars, should traverse your rights-of-way...a route of magnificent scenic grandeur.

It has been a pleasure to work with your organizations. They have been most cooperative and helpful.

Cordially

Edward G. Budd Jr.
President

*The California Zephyrs
Built by
The Budd Company
for the
Burlington
Rio Grande
Western Pacific*

CALIFORNIA



A ZEPHYR



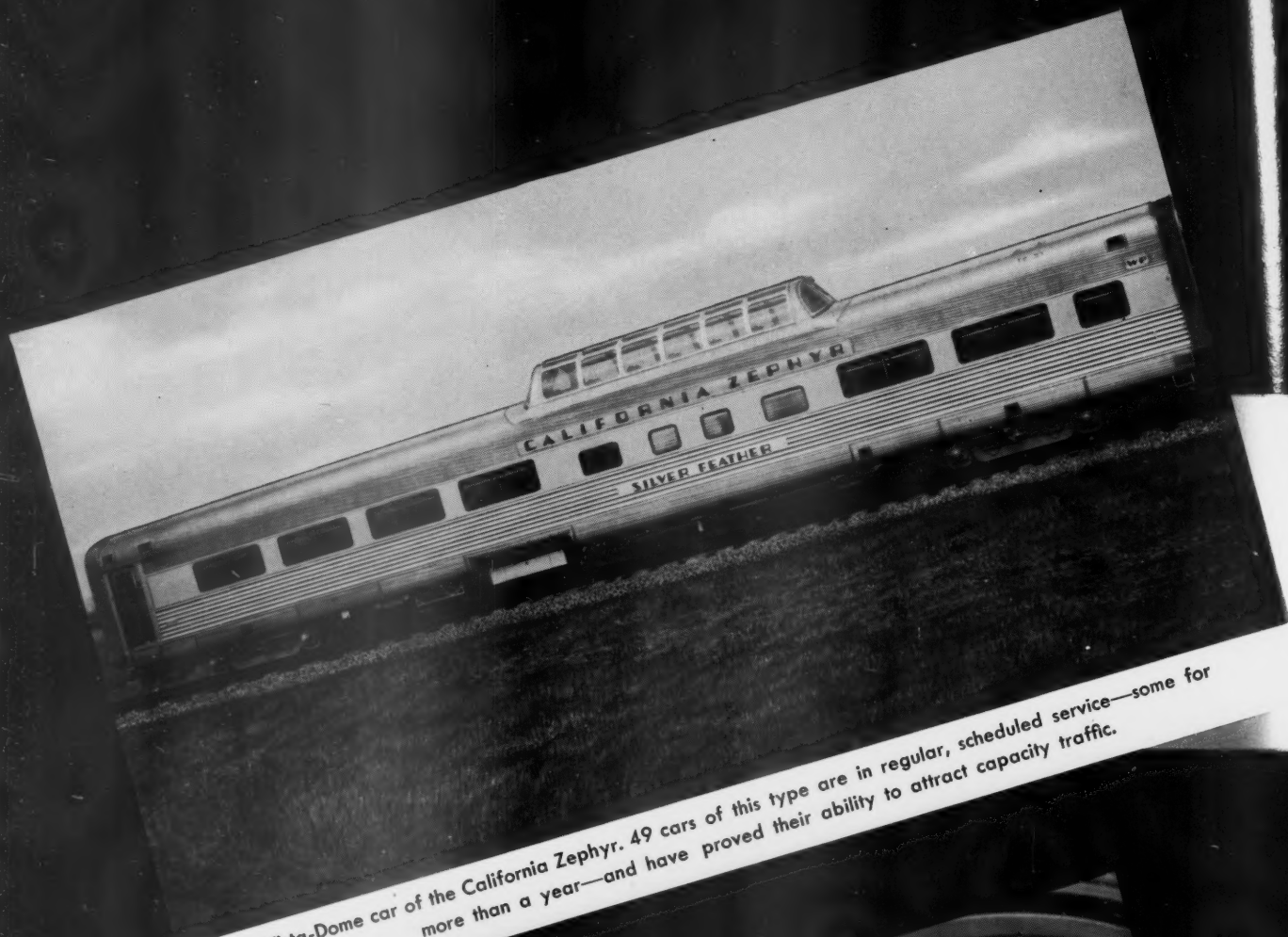
CALIFORNIA



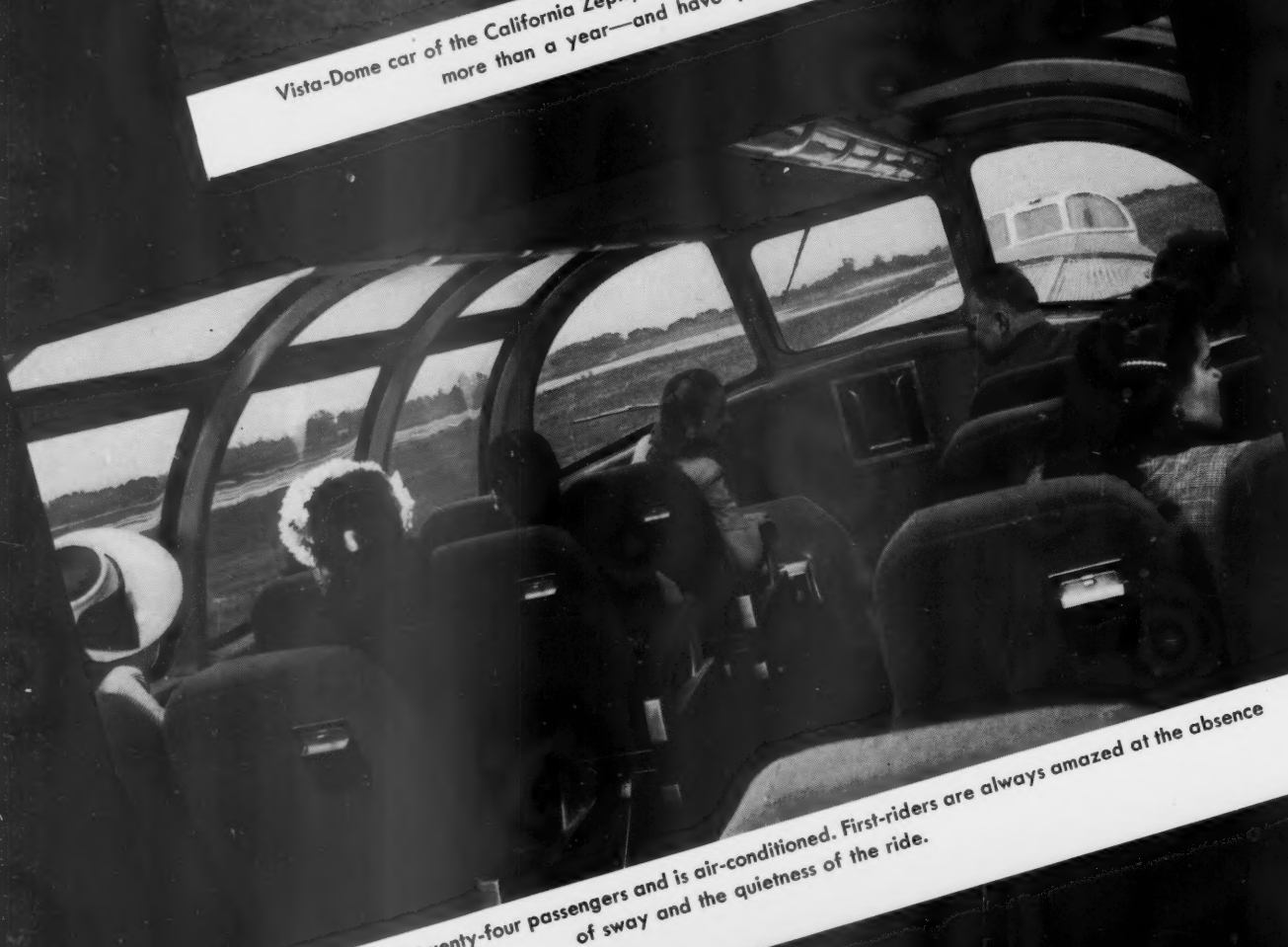
Birthplace of the California Zephyrs

The 67 all-stainless steel cars of the six California Zephyrs were built in this plant—most modern in the world for the construction of railway cars. Approximately one third of the nation's new railway passenger cars (exclusive of railroad production) are being built here.

ZEPHYR



Vista-Dome car of the California Zephyr. 49 cars of this type are in regular, scheduled service—some for more than a year—and have proved their ability to attract capacity traffic.



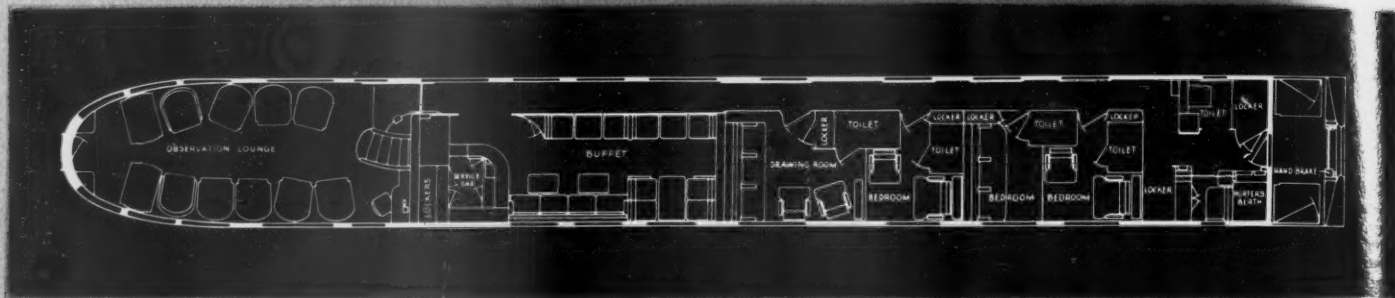
The Dome seats twenty-four passengers and is air-conditioned. First-riders are always amazed at the absence of sway and the quietness of the ride.

Vista-Domes for the California Zephyr's Wonderful Scenery

The route of the California Zephyr traverses some of the most spectacular scenery in the United States. And the trains are scheduled, both westbound and eastbound, to pass through its most magnificent parts in daylight.

The consist of each California Zephyr includes 5 Vista-Dome cars from which passengers may view Gore and Glenwood Canyons, the highest Colorado Rockies, the Sierras and the Feather River Canyon in California.

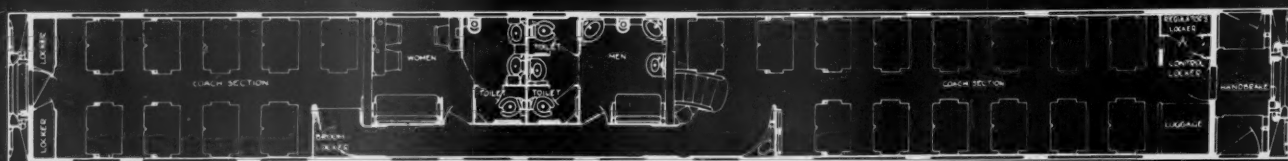
CALIFORNIA ZEPHYR



Dome-observation-buffet-bedroom car accommodates 56 passengers. In addition to a large, luxurious drawing room there are three double-bedrooms.

The Versatile Vista-Dome Car

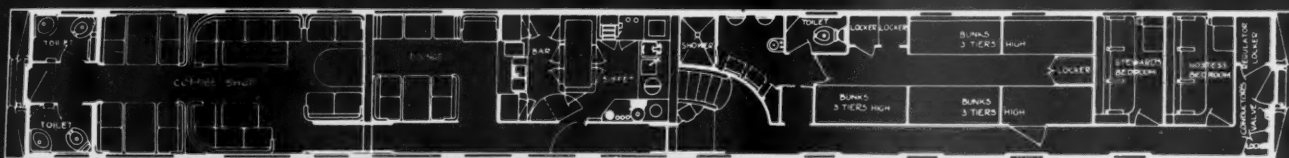
Of the five Vista-Dome cars in each California Zephyr, no two are alike. The available space is capable of wide variation to meet the many different requirements of these blue ribbon trains.



This Vista-Dome car seats twenty-four passengers in the dome and forty-six in the lower, main compartments. Spacious men's and women's lounges are located under the dome.



In this Vista-Dome car the forward "downstairs" section is separated from the rest of the car by a door and is reserved for women and children.



This Vista-Dome car contains a dormitory section for the crew with 15 berths and ample storage space. There are also rooms for the steward and the hostess.



This Vista-Dome car provides "office space" for the conductor. All the dome coaches are equipped with seats having leg rests attached to the passenger's own chair which cushion the entire leg.



Interior of the California Zephyr diner in which forty-eight may be served simultaneously.



This ultra-modern, all-stainless steel kitchen is separated from the dining section by an air curtain which prevents the escape of cooking odors.



The buffet section of the buffet-lounge-dormitory dome car accommodates nineteen persons, with two banquette sections and three large coffee tables.



The buffet section of the dome-observation-bedroom-buffet car is located under the dome and accommodates twelve passengers with banquettes and cocktail tables.



The service bar of the dome-observation-bedroom-buffet car. It is located just forward of the stairway to the dome, has a rounded front and is backed by mirrored cabinets.

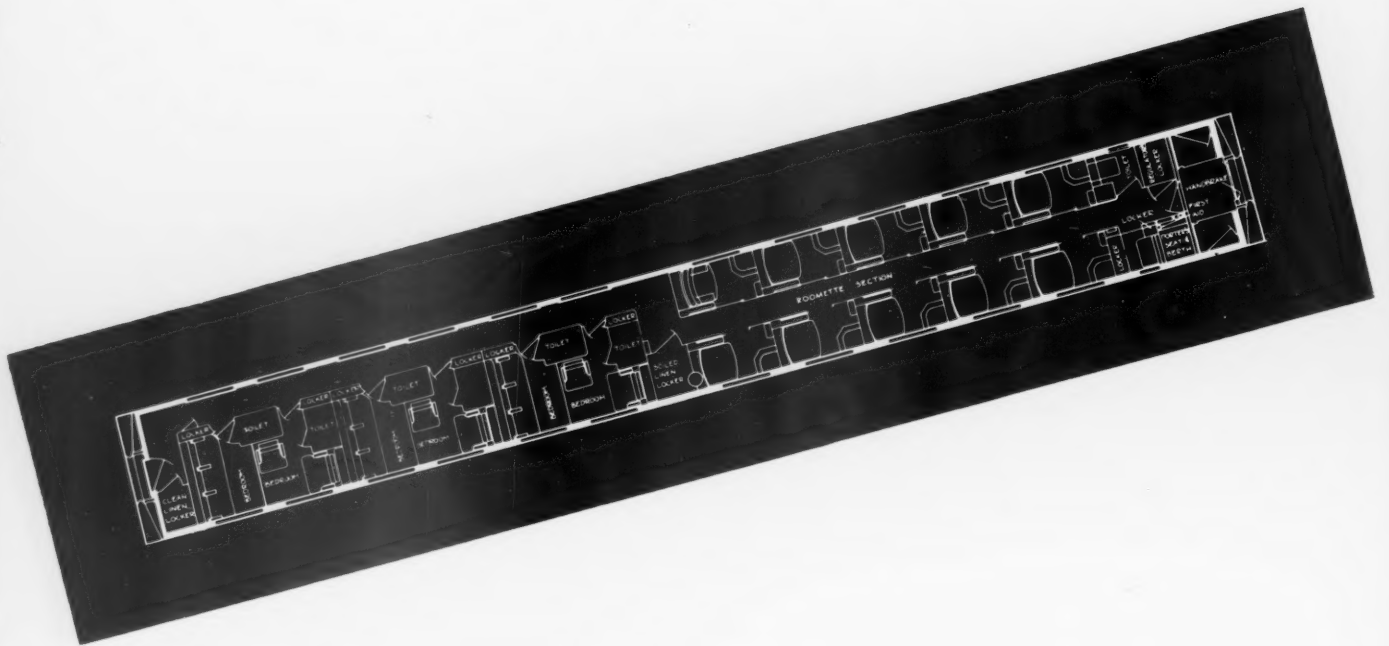
Choice of a Snack or a feast

Dining facilities on the California Zephyrs meet every requirement of appetite or pocketbook—and good taste extends beyond the excellent food to the beautiful surroundings in which it is served.

The diner accommodates 48 with an attractive seating arrangement which gives the effect of intimacy and informality.

In addition to the diner there are two cars with buffets, one accommodating twelve, the other nineteen. No small boy with that sudden and irrepressible urge need ever go hungry or thirsty on the California Zephyr.

CALIFORNIA ZEPHYR



New Budd Sleepers for the California Zephyr

In each California Zephyr's consist are five cars with sleeping accommodations, one a sixteen section sleeper, three all-room cars, and bedrooms in the dome-observation car.

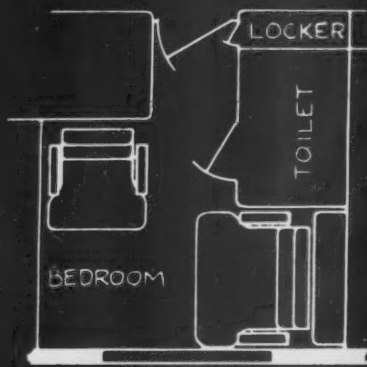
The room cars embody the new Budd design which is being generally adopted because of its adaptability, efficiency and superior utilization of space.

Each contains ten roomettes and six double-bedrooms, the latter so arranged that pairs of double-bedrooms may be combined into Master Drawing Rooms for family or group occupancy, doing away with the wasteful bugaboo of fixed drawing room space.

CALIFORNIA

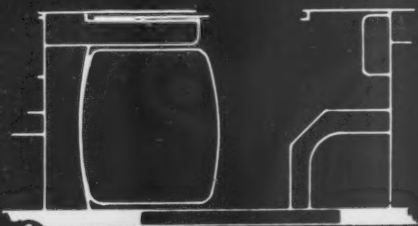


A ZEPHYR



There are two types of Budd-designed double-bedrooms, one with berths lengthwise of the car, the other, crosswise. Each is distinguished by many welcome improve-

ROOMETTE



The roomette has a large, sofa-type seat wide enough for two persons and adjustable to three positions. The top of the toilet forms a third seat. In addition to a large, perfectly lighted mirror for shaving or make-up, there is a full length mirror in the face of the sliding entrance door.

A particularly welcome feature of Budd roomette design is the ability of the passenger to raise or lower the bed while inside the room with the door closed. As in all Budd room cars, the beds are one to three inches longer than standard.



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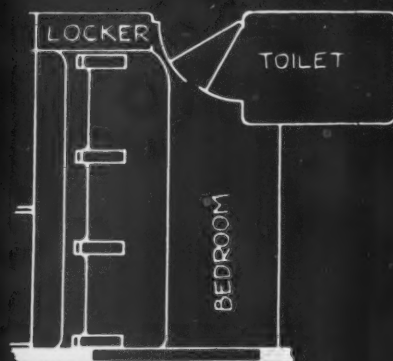
ments in double-bedroom design. Most obvious are the fully enclosed toilet facilities, full-width panorama window, and enclosed, lighted clothing wardrobe.

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The Master Drawing Room is formed by folding back the partition between two double-bedrooms, providing a spacious apartment. By day it comfortably accommodates seven people on its big sofa and its overstuffed lounge chairs.

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At night the flexibility of the Master Drawing Room is especially apparent. Children can be put to bed early in one room while parents stay up to read or play cards in the other, while the communicating door permits ready access between them. Same goes for the early-to-beds and the night owls in a business group.



California Zephyr

Special emphasis has been placed on the design and location of all controls for lights, heating, air-conditioning and radio. All are mounted on a single panel easily reached from a sitting position, or from the berth by night.



1. Air conditioning control.

2. Push button for Porter service.

3. Switch for ceiling light.

4. Four-position fan switch.

5. Potentiometer for heat control.

6. Volume control for radio.

7. Selector switch for radio and Public Address system.

The lighting system insures perfect general illumination at all times, with reading and wall lights, and fluorescent ceiling and mirror lights.

Heating and air-conditioning are especially designed for the extremes of climate the California Zephyrs encounter. Heating is automatic, with manual control when desired. The air-conditioning unit is located in the ceiling in a multi-vent panel with many closely spaced, small holes for even air distribution. A three speed fan is also available.

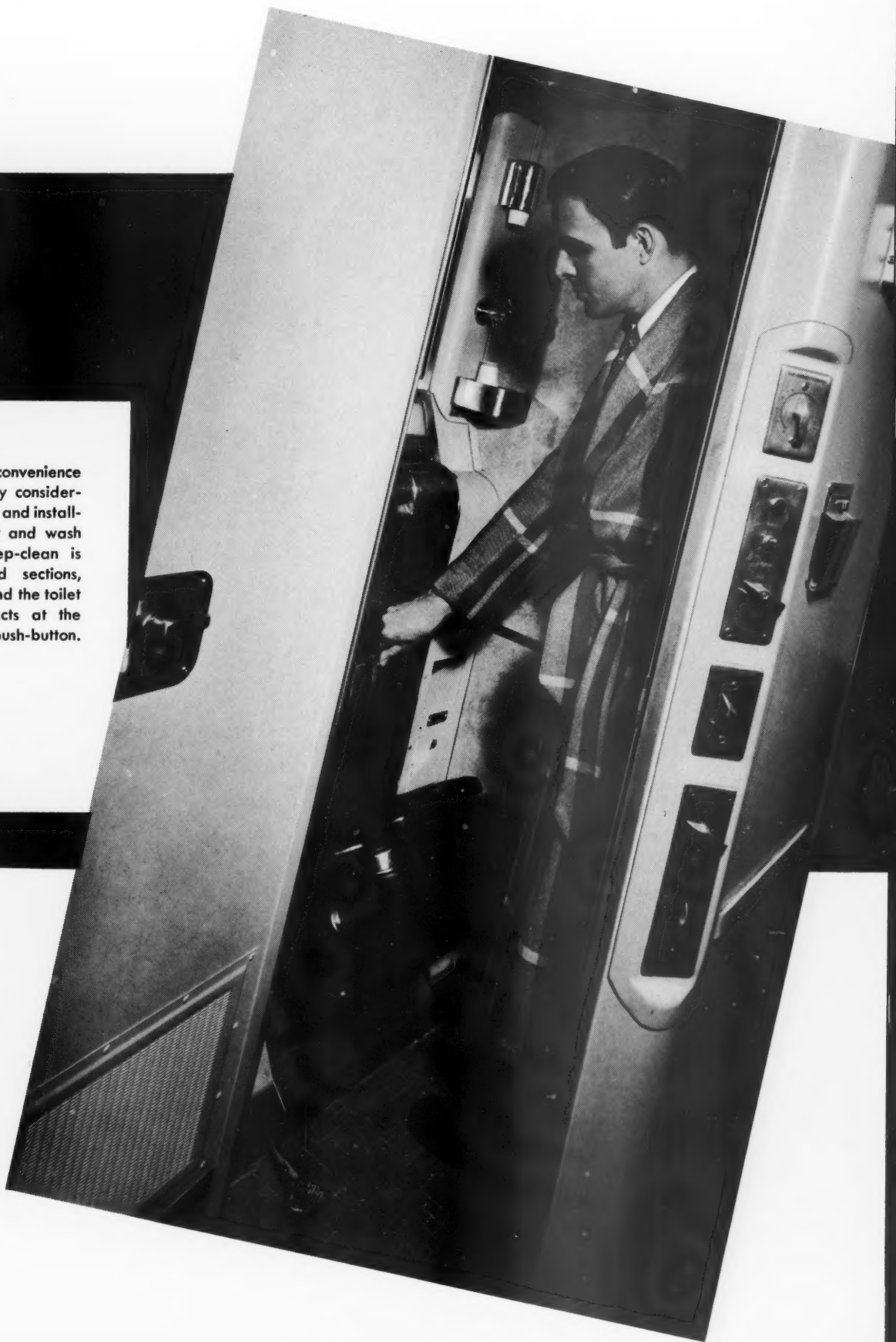


All rooms in the California Zephyr have running ice water.



Bedroom Detail

Sanitation and convenience have been primary considerations in the design and installation of the toilet and wash basin. Easy-to-keep-clean is evident in curved sections, smooth surfaces. And the toilet emerges or retracts at the simple touch of a push-button.





The Car that has Everything

DOMES . . . OBSERVATION . . . BUFFET . . . BEDROOM

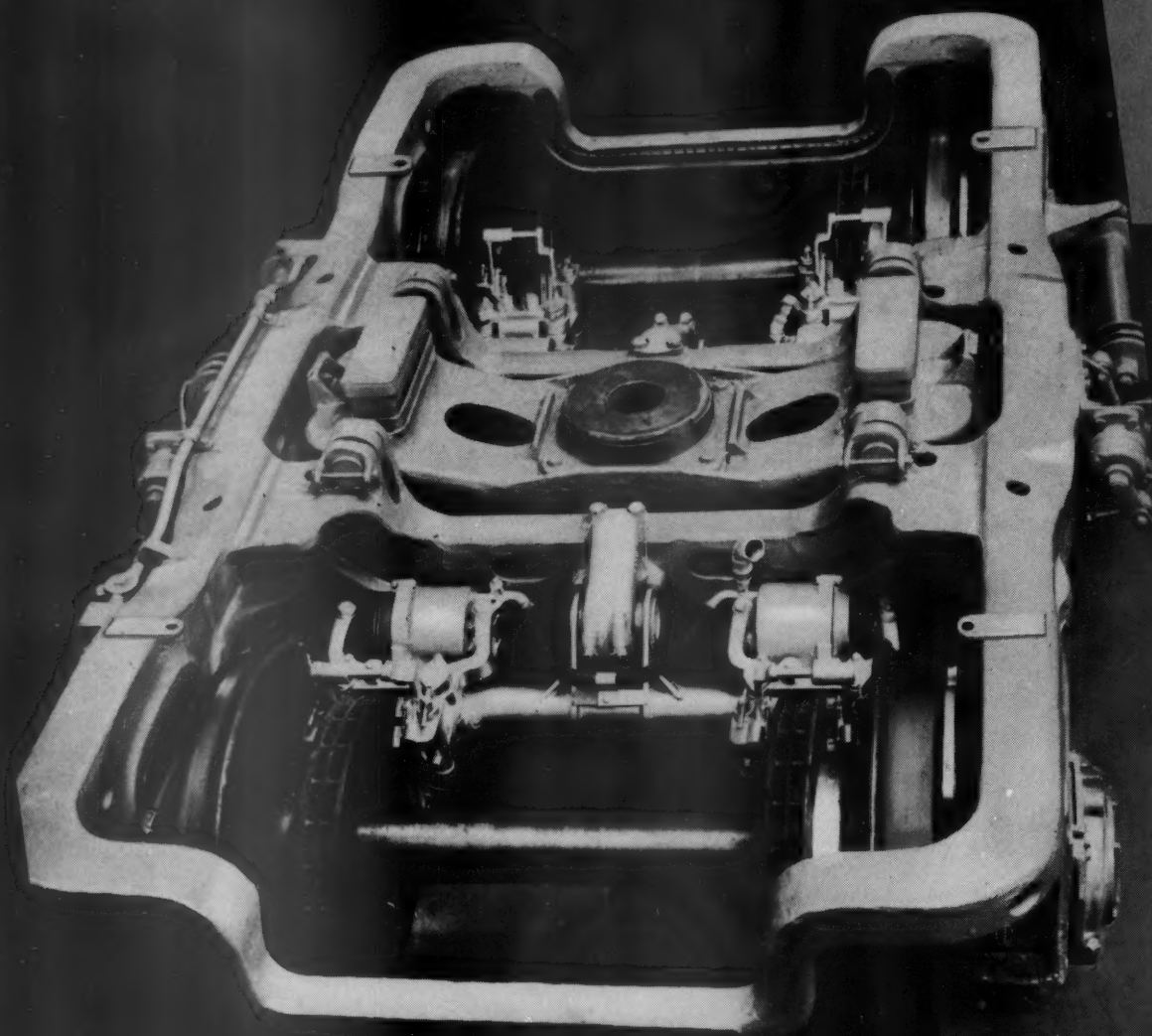
The California Zephyr's observation car provides an amazing combination of facilities.

Sleeping accommodations include three double bedrooms and one of the most luxurious drawing rooms you ever saw.

Back of them, in the lowered section under the dome, is a beautiful buffet where twelve passengers may be served. And the rear end of the car is the lounge and observation section.

"Upstairs" is the dome, seating twenty-four passengers, air conditioned and almost unbelievably quiet, from which to enjoy to the fullest the magnificent scenery which the California Zephyr's route traverses.

CALIFORNIA ZEPHYR



Budd Railway Disc Brake (Model CF) developed by the Budd Research Staff.

Budd Disc Brakes (MODEL CF) *For The California Zephyr*

On a run requiring many brake applications, the smooth, almost imperceptible action of Budd disc brakes adds immeasurably to passenger comfort. But there are more practical reasons for their installation in the California Zephyr.

First is their stopping ability. They can stop a car weighing 160,000 pounds, equipped with four-wheel trucks, from 100 miles an hour in 2500 feet. That means they can turn a possible emergency into a mere incident.

They don't overheat on long grades, and, since they never come in contact with the wheels, they eliminate heat checking.

Average brake-shoe life is 100,000 miles, an important consideration from the standpoint of maintenance.

Add to these advantages a weight saving of about a thousand pounds per car, and it is apparent why Budd Disc brakes (Model CF) were specified for the California Zephyrs.

CALIFORNIA ZEPHYR

How We Know Budd Cars are the Strongest, Safest Cars Built

Because Budd design differs so basically from conventional railway car design—a difference made possible by the use of stainless steel as a structural material—testing facilities have been created to prove the design's superiority.

For capacity and completeness, Budd testing facilities have no equal in the world. They can place an entire railway car under compression up to two million pounds, or determine the shear strength of a single weld.

The correctness of strength calculations can be proved physically for any component of the car, such as roof sections, center sills, collision posts. These facilities enable Budd to build for maximum strength with minimum weight.

CALIFORNIA

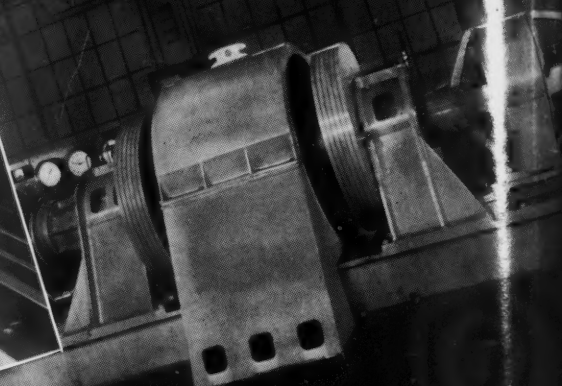


Budd Railway Car Testing Machine, capable of exerting end pressures up to 2,000,000 pounds.

A ZEPHYR



Test equipment installed in interior of car. 480 strain readings can be recorded simultaneously.



One of the largest railway brake dynamometers in the world.

Budd Research Service for the Railroad Industry

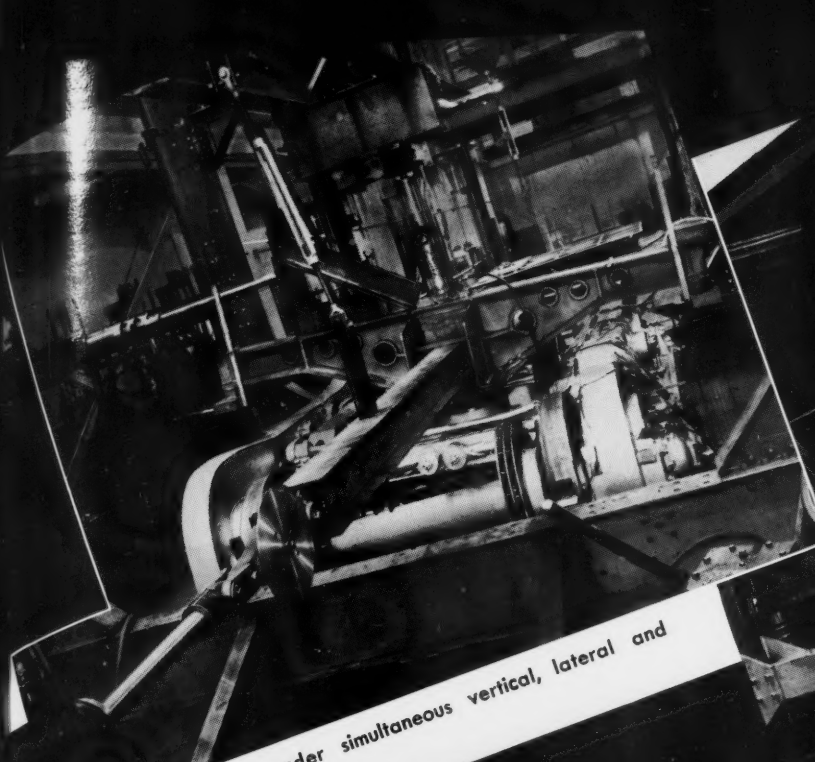
The many inventions, innovations and improvements incorporated in the California Zephyrs are products of Budd research and development facilities and personnel.

For many years these unique facilities were devoted exclusively to Budd operations. Recently it was decided to make them available to any railroad or industrial organization engaged in the manufacture of railway cars and their equipment.

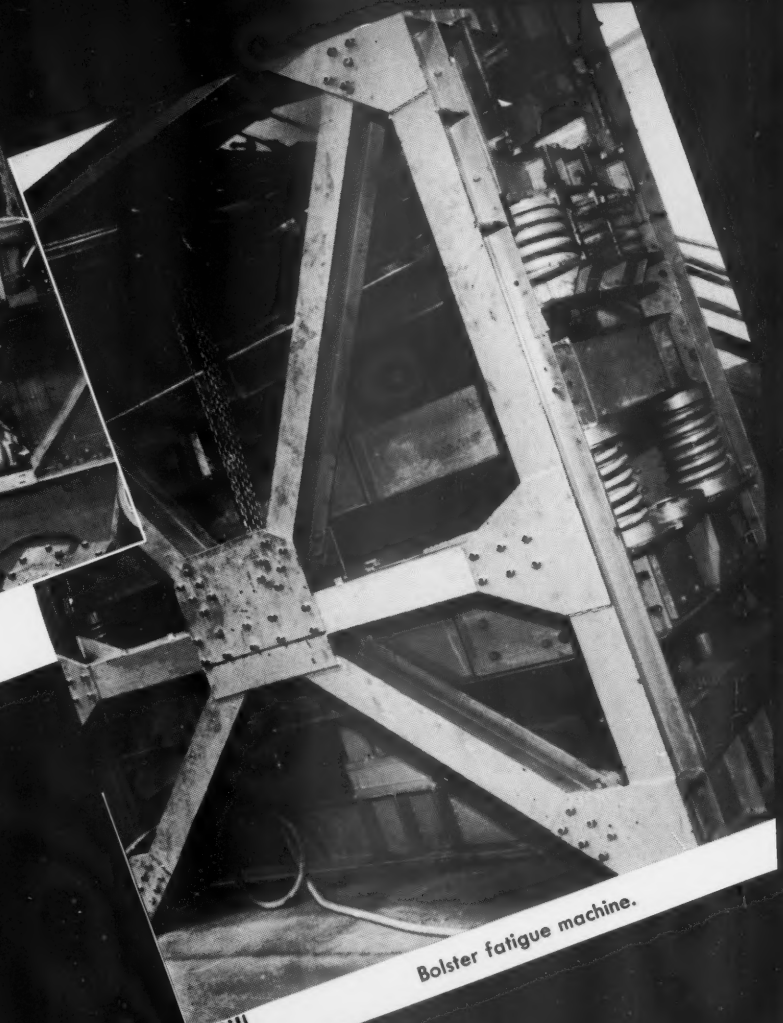
The object is to contribute on the broadest base to the general improvement of railway passenger equipment to make the railway train, as a vehicle, more attractive to the traveling public and more economical and profitable to operate.

This research and development service, which is carried out on a completely non-profit basis, is described in considerable detail in a 24-page booklet entitled "Budd Railway Research Plan." You may have a copy of this booklet by addressing a request to The Budd Company, Philadelphia 32.

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Railway truck under simultaneous vertical, lateral and horizontal loading.



Bolster fatigue machine.

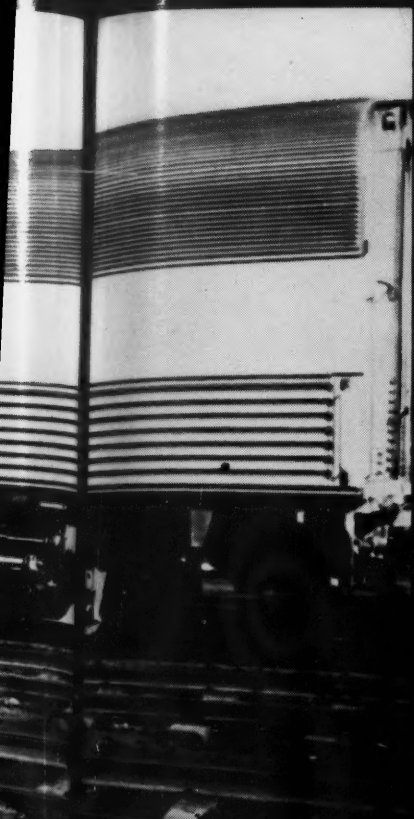
BUDD RAILWAY
RESEARCH PLAN

CALIFORNIA ZEPHYR



*Budd Believes in
"Proof of the Pudding"*

CALIFORNIA ZEPHYR



Window in floor of Budd Test Car for observing trucks, wheels and brakes.

While many things new go into Budd-built trains there is never anything "untried."

As part of its program of testing and proving, The Budd Company employs a special research car which is a laboratory on wheels. Its purpose is to permit investigation, under actual service conditions, of riding qualities, sound insulation, vibration elimination, and testing trucks, brakes, all types of auxiliary equipment and similar projects.

The car contains an amazing assortment of equipment for measuring acceleration, deceleration, vertical, lateral and longitudinal stresses, truck and brake action, and vibrations of all kinds, and even has windows in the floor to permit observers to watch the action of trucks, wheels and brakes.

Out of this research car have come many of the proven features which make the California Zephyrs outstanding.

The Ever-Growing List of Railroads Which Have Purchased Budd All-Stainless Steel Railway Cars

Atchison, Topeka & Santa Fe
Atlanta & West Point
Atlantic Coast Line
Boston & Maine
Central of Georgia
Chesapeake & Ohio
Chicago, Burlington & Quincy
Chicago, Rock Island & Pacific
Cincinnati, New Orleans & Texas Pacific
Colorado & Southern
Delaware, Lackawanna & Western
Denver & Rio Grande Western
Florida East Coast
Fort Worth & Denver City
International-Great Northern
Louisville & Nashville
Maine Central
Minneapolis & St. Louis
Missouri Pacific
New York Central
Norfolk & Western
Pennsylvania
Reading
Richmond, Fredericksburg & Potomac
Seaboard
Southern
Southern Pacific
Texas & Pacific
Union Pacific
Wabash
Western Alabama
Western Pacific

Budd

LUMINATOR *Fluorescent Lighting* ON THE NEW **CALIFORNIA ZEPHYRS**

These new cars, built by The Budd Company for the Chicago, Burlington & Quincy, Denver and Rio Grande Western and Western Pacific Railroads are equipped with fluorescent lighting arrangements developed especially for this newest streamliner.

Ample reading light and soft, glareless general illumination are combined in these cars by application of the latest scientific developments in lighting techniques.



Photos courtesy of The Budd Company



The combination of lensed glassware and fluorescent light has produced an interior effect of soft sparkling informality that makes travel by California Zephyr an added pleasure. Here is another example of the advantages to railroads, car builders and designers in utilizing Luminator engineering, design and manufacturing facilities to create lighting that compliments the decor of today's trains... Luminator Streamlighting for the nation's streamliners helps make travel by rail restful, interesting and enjoyable.



LIGHTING ENGINEERS • DESIGNERS • MANUFACTURERS
LUMINATOR inc.

120 NORTH PEORIA ST., CHICAGO 90, ILLINOIS
IN CANADA: RAILWAY AND POWER ENGINEERING CORP.



The H.S.C brake doesn't have to wait for its "second wind"

One of the big advantages of the HSC Electro-Pneumatic Brake is its flexibility — derived from electro-pneumatic control.

With HSC Electro-Pneumatic Brakes, application is controlled electrically, instead of by pressure reduction in the brake pipe. The brake pipe continuously supplies storage reservoirs on each car, which are constantly recharged as air is used. HSC Brakes never have to wait for their "second wind."

To match the comfort and safety of your modern equipment with maximum comfort and safety in brakes, we recommend this modern combination:

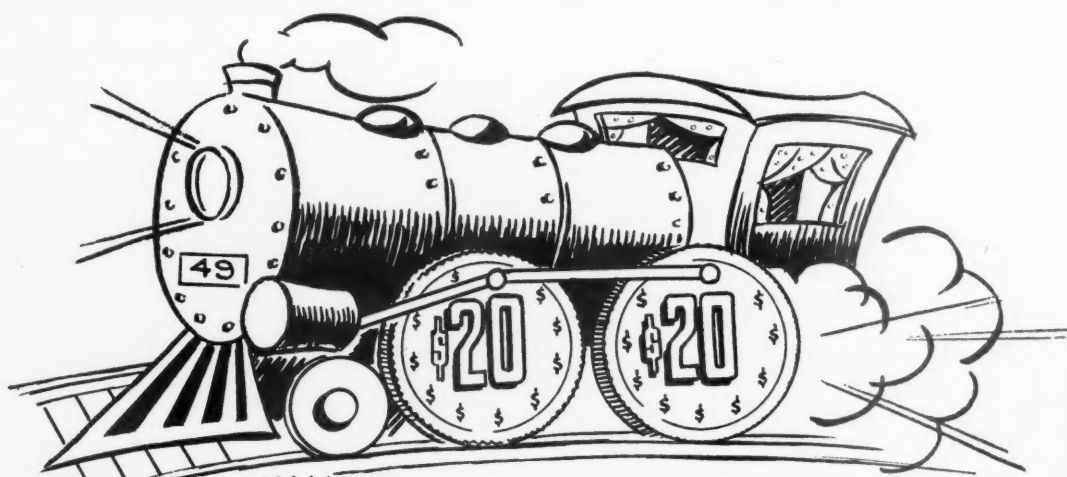
"HSC" Electro-Pneumatic Brake . . . for brake flexibility to match modern train speeds, and unequaled smooth action. Speed Governor Control . . . for regulating brake forces to wheel speeds. "AP" Decelostat . . . for wheel slip detection to keep the wheels rolling.



Westinghouse Air Brake Co.

WILMERDING, PA.





THERE'S GOLD IN THEM THAR WHEELS

Use Wheel Truing Brake Shoes to **mine a rich lode** of extra miles from worn or flat wheels. Abrasive brake shoes have meant **pay dirt** for railroads for over fifty years. **Stake your claim** to reduced maintenance and service costs.

Write for further details—today.



SERVING THE RAILROADS OF THE NATION FOR FIFTY YEARS

WHEEL TRUING BRAKE SHOE CO.

628 W. BALTIMORE, DETROIT 2, MICHIGAN

*Registered
U. S. Patent Office

DUNER WATER CLOSETS

FOR RAILWAY PASSENGER CARS

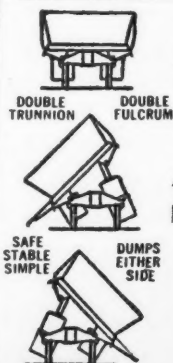
STANDARDIZED PARTS

ECONOMICAL MAINTENANCE

DUNER COMPANY

107 South Clinton St.

Chicago 6



**AIR DUMP
CARS**



**RAIL CARS
MINE CARS
AND
LOCOMOTIVES
AXLESS TRAINS**



**COMPLETE
HAULAGE SYSTEMS**

DIFFERENTIAL STEEL CAR CO.
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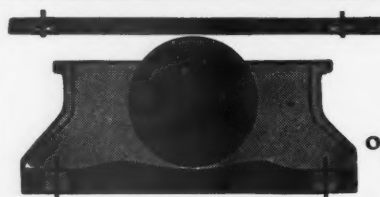
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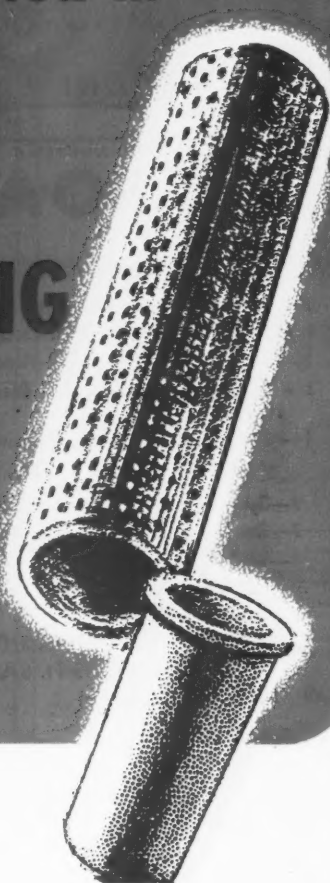
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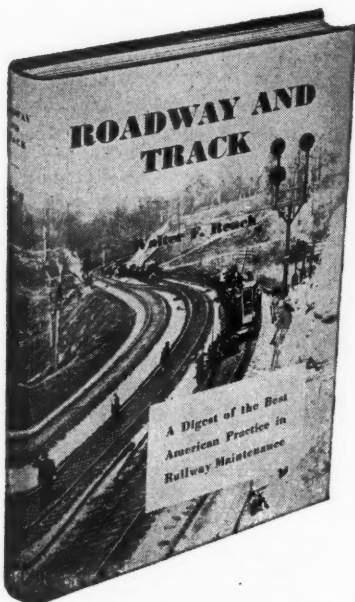
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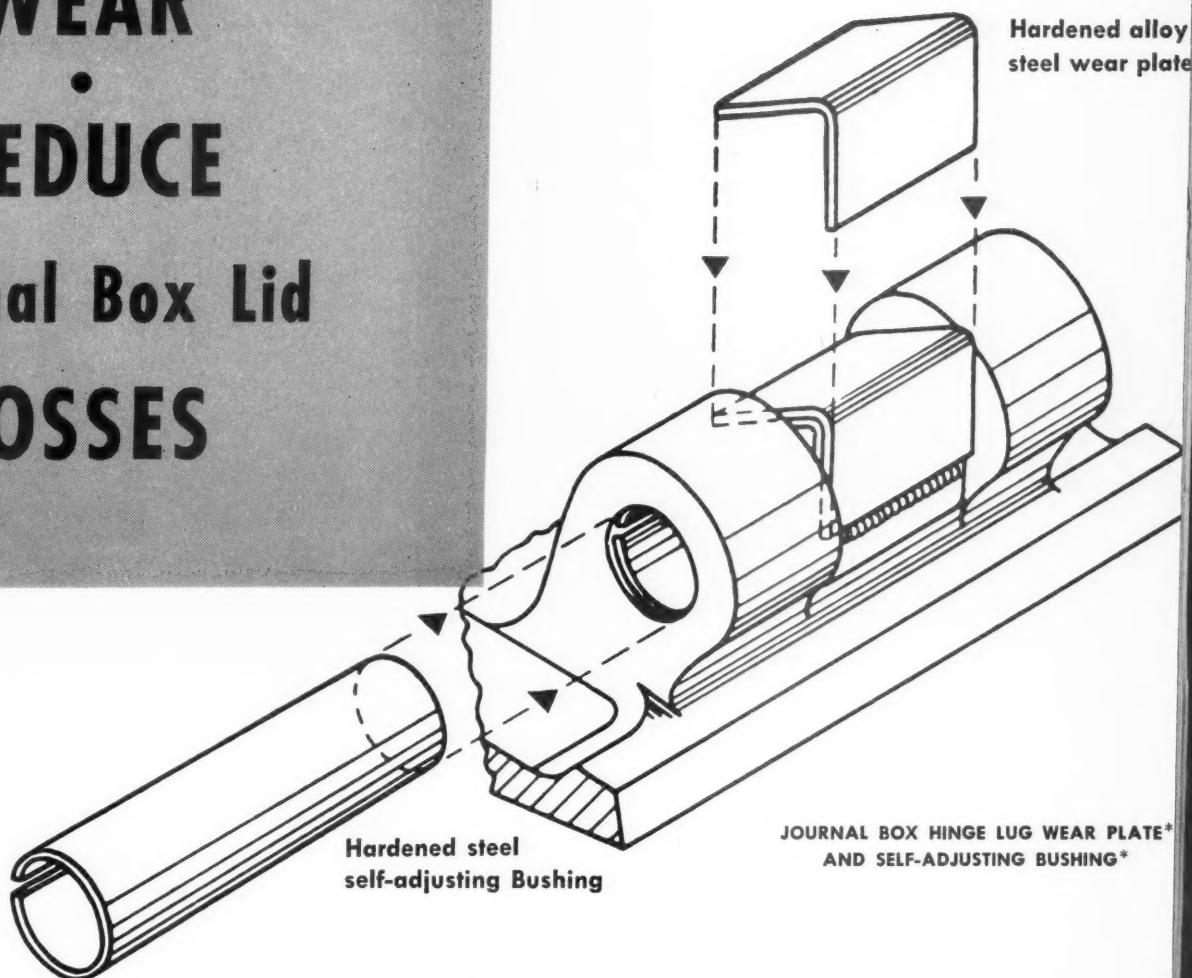
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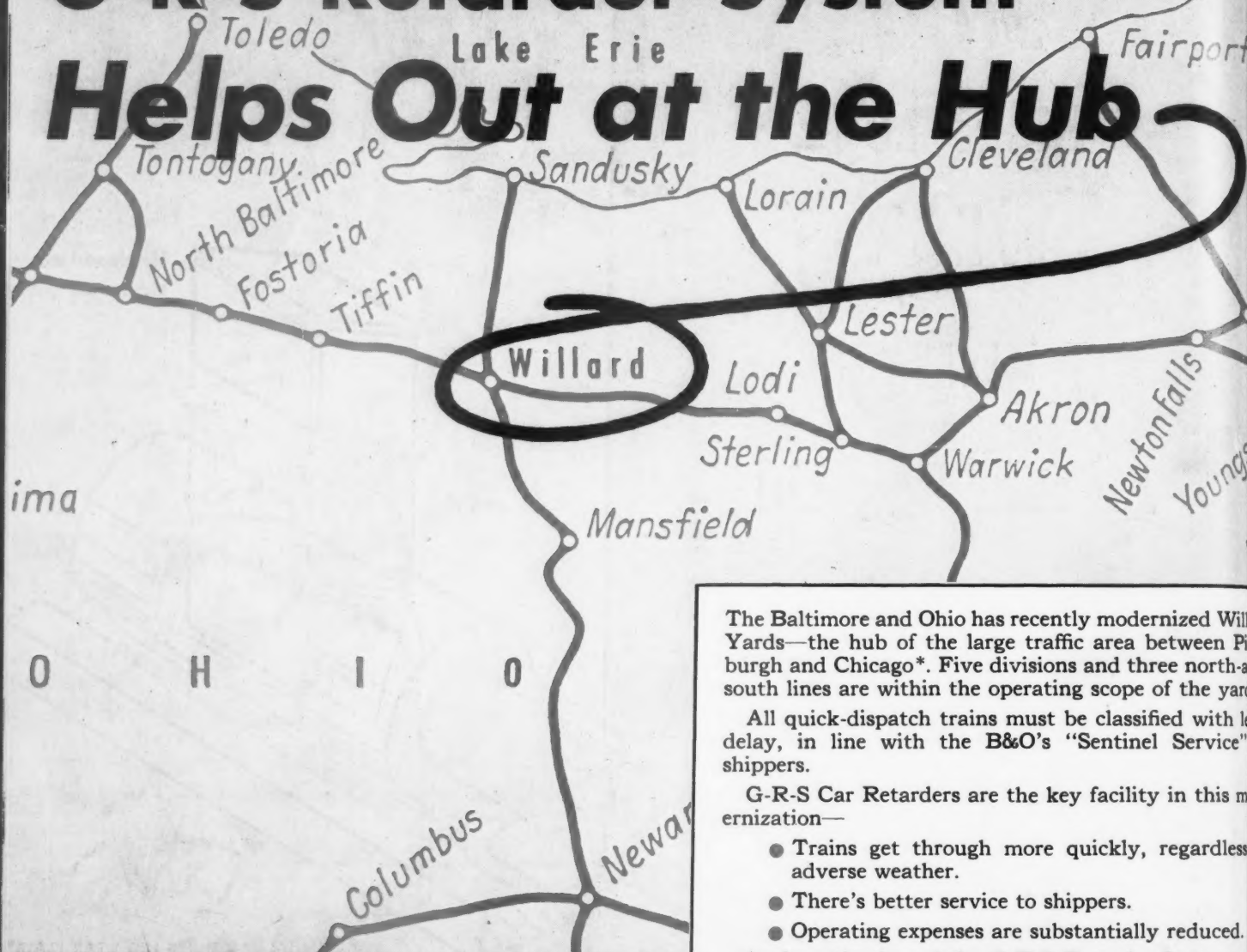
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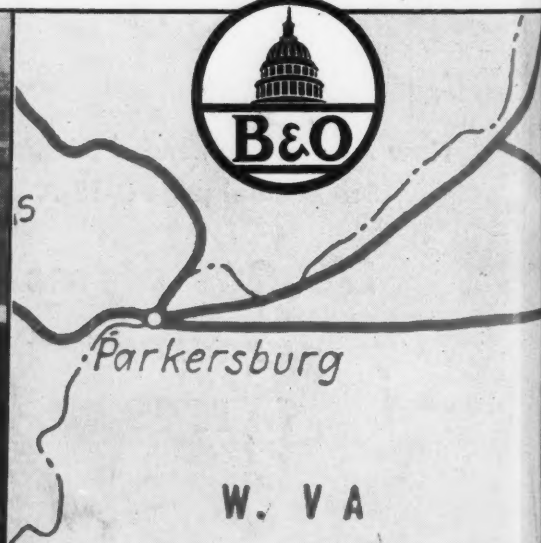
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